

FLIGHT

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AND AIRSHIPS

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EDITORIAL COMMENT



THE 1930 race for the King's Cup was a curious mixture of success and failure. It was a success in having attracted a great number of entries, and in that a large percentage of the entries were starters, while also a large percentage of the starters finished the course. It was a failure in many details, and might easily, had weather conditions been unfavourable instead of ideal, have been a fiasco with many sad accidents.

King's Cup Race

One hundred and one machines had been entered, of which 88 started on the morning of the race, a percentage of 87. Of the 88 starters 60 finished, a percentage of 68. This fact speaks well for the increasing reliability of the modern light 'plane engine. It is to be remembered that a race in which the engines are kept running at maximum power for a distance of 750 miles, imposes a very much more severe strain on the engines than does a very much larger mileage at cruising speed. Out of the 28 competitors who either retired or made forced landings, not a single one received injuries of a serious nature. Doubtless the excellent weather conditions on the day of the race assisted largely in this happy state of affairs.

The general interest in the King's Cup Race was considerable, more especially in the North than in London. But with so many machines competing it became almost impossible to keep track of who was winning and who was not, who was drawing ahead, and who was falling back.

The King's Cup Race has every chance of becoming a great National event, but if it is to do so it is essential that any shortcomings which are now becoming apparent should be remedied before they have had time to assume unmanageable proportions. And they very nearly did on Saturday last. The very large number of competitors, about twice as many as in any previous year, necessarily meant the need for very careful organisation. The Royal Aero Club Racing Committee had known for some considerable time the probable number of starters, and

DIARY OF CURRENT AND FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in this list—

1930

- July 9-12.. R.A.F. Athletic Championships, Uxbridge.
- July 11 .. Film Lecture, "Civil Aviation" by the Hon. Lady Bailey and Capt. C. D. Barnard, at Temple St. Temperance Hall, Birmingham.
- July 12-13 Gliding by Herr Kronfeld at Scarborough.
- July 13 .. N.F.S. Flying Meeting, Leeds.
- July 17-23 "British Week" at Antwerp Exhibition.
- July 19 .. Air Pageant at Hanworth, in Aid of National Birthday Trust Fund.
- July 19 .. S.M.A.E. Model Competitions, Halton Camp.
- July 20- Aug. 7 International Light 'Plane Tour of Europe, starting from Berlin.
- July 26 .. Norwich Flying Meeting.
- July 31 .. Entries close for 1931 Schneider Trophy Contest.
- Aug. 15-31 Circuit of Italy.
- Aug. 17 .. Shanklin Meeting.
- Sept. 1-6 5th International Air Congress at The Hague.
- Sept. 6 .. Opening of Ratcliffe Aerodrome, Leicester.
- Sept. 20 .. Liverpool Air Pageant.
- Sept. 27 .. N.F.S. Air Meeting, Hanworth.
- Nov. 28- Dec. 14 Paris Aero Show
- 1932
- May 31 .. Closing date for Cillon Cross-Channel Glide £1,000 Prize.

so a plea of surprise cannot be supported. We willingly admit that the task is not an easy one, but as the institution governing the sport of flying in this country the Royal Aero Club has obligations which it cannot escape, and no matter what are the difficulties, they will have to be faced and overcome.

At Hanworth the arrangements worked smoothly enough, although even there room for improvement was present. Hanworth was the starting and finishing point, and the timing was in the hands of such able men as Col. Lindsay Lloyd and Mr. Reynolds, who are proverbially proof against being flustered. But the same cannot, unfortunately, be said of the controls *en route*. At Bristol there does not appear to have been any trouble. The machines were still fairly well separated when arriving there. But at the other controls it seems fairly evident that the organisation was not equal to its task. Pilots who returned to Hanworth on Saturday evening had tales to tell of delays due to having to wait at the controls for someone to start them. And at least two pilots told us that they had, in the end, to go off without being officially started, there being nobody to do so. In other words, all the careful handicapping was, in quite a number of cases, entirely nullified by the breaking down of the timing and starting organisation at the northern controls.

We do not claim that this fact affected the final results as far as the first two or three machines were concerned. Probably it did not. Miss Brown was gaining steadily all the way, obviously having found a few miles per hour which Mr. Dancy had not allowed for. She would probably have been the winner in any case. But the placing of many of those who followed her might have been very different had the organisation at the controls been more perfect.

The trouble, initially, was due to the large number of competitors, but that, as we have said, was expected beforehand, and steps should have been taken to provide for it. This would not only have meant a larger number of competent timekeepers, but also a better division of the control aerodrome space into areas for landing, areas for waiting the 40 minutes, and areas for taking off. As it was, the machines were crossing each others' bows in an alarming fashion, and got badly mixed up, so that in the end the timekeepers could not find the machines which they should be sending off, and the competitors could not find the timekeepers to drop the flag for them.

Even at Hanworth there was lack of forethought in the arrangements for the finish. Competitors who had crossed the finishing line in flight swung

around to land, and in so doing cut across the bows of other competitors who were just approaching the finishing line. As luck would have it, there were no collisions, but that is no excuse for unsound management. Hanworth is large enough in all conscience, and all that would have been necessary was to make competitors land on the other side of the club house, right away from the finishing line. There would then have been no risk of collision, and no confusion as to who had crossed the line.

The absence of score boards at Hanworth made it well nigh impossible to follow the race with any degree of appreciation of progress. The broadcasting of news failed entirely to make up for the absence of score boards. And the manner in which the machines had been numbered merely added to the confusion. Evidently the numbers carried by machines reflected the order in which they had been entered for the race. But that is of no interest to anyone. What *should* have been done, and what we hope will be done next year, is to number the machines in accordance with the handicaps. The limit man would be No. 1, the next one No. 2, and so forth. Then, as news came through from, say, Manchester, that the order of arrival there was, for example, 7-5-1-3-2-4 and so forth, these numbers would be hung up on the score boards, and the public would be able to see at a glance that No. 1 had dropped from first to third place before reaching Manchester, while No. 7 had pulled up to leading position, and so on. It is useless expecting the public to be able to work out speeds from arrival times, and, anyway, speed as such does not interest the public in a handicap race. What does interest is *place*, and by numbering according to handicap it is quite easy to see at a glance, from score boards, the position at any control. With the system of numbering used this year that was a physical impossibility. Even in the press tent, where the arrival times at the various controls were entered on a large board, it was almost hopeless to attempt to follow the progress of the race.

It may be objected that changes in handicaps at the last moment would upset the system of numbering and leave no time for competitors to paint their numbers on the rudder. The answer to that is that there should be no last-minute changes in handicap. If a competitor is found to have "faked" his machine beyond what he has declared, he should be punished by being ruled out. With no lack of entries, the Royal Aero Club can nowadays afford to be strict. In fact, it must be if future King's Cup Races are to be worthy of serious consideration.

AT BUCKINGHAM PALACE

HIS MAJESTY THE KING held an Investiture at Buckingham Palace on July 5, at which Air-Marshal Sir E. Ellington (Principal Air Aide-de-Camp) and Group Captain L. W. B. Rees, V.C. (Aide-de-Camp in Waiting), were present. The following were amongst those introduced into the presence of the Sovereign, when the King invested them with the insignia of the respective Divisions of the Orders into which they have been admitted:—

Order of the Bath (Military Division)

Received the Honour of Knighthood, Knight-Commander Air Vice-Marshal David Munro.

O.B.E. (Military Division)

Commander:—Wing Commander Harold Whittingham.

Officers:—Wing Commander William Millet, Squadron-Leader Alan Bishop, and Squadron Leader Hugh Leedham.
Members:—Flight-Lieut. Sidney Bailey, Sergt.-Major Alfred Box, Sergt.-Major Laurence Fears, and Sergt.-Major Frank Lamdin.

His Majesty then conferred Decorations as follows:—

The Royal Red Cross.

Member:—Miss Katherine Watt, Princess Mary's Royal Air Force Nursing Service.

The Air Force Cross

Squadron-Leader Alan Lees, Flight-Lieut. Henry Lock, Flight-Lieut. John McFarlane, and Flight-Lieut. Alfred Wardle.

THE KING'S CUP

MISS W. BROWN'S WIN

A Record Entry

ALL ideas founded on experience of former races for the King's Cup were quite upset by the race of July 5, 1930. It was not the fact that a woman pilot came out best on the handicap which makes this race unlike all others. A woman was bound to win the race sooner or later. The number of entries, the number of starters, and the number of machines which got home completely changed the early character of the race. Of 101 entries no less than 88 actually crossed the line when the starter dropped his flag, and of these starters 61 flew round the course and back to Hanworth before 8 p.m. the same evening. One or two of the finishers had already been ruled out of the race for failing to round turning points, but that does not alter the fact that 61 machines, engines, and pilots stood up to the course of 750 miles. It is really an astonishing result.

the 80-100 h.p. engines to make the most out of their handicaps, and made it as easy as possible for amateur pilots to find their way round the country.

But when all allowances have been made for the weather, the facts remain that the modern aero engine has become extraordinarily reliable, and that the common-or-garden pilot of a light aeroplane is now a very competent pilot. Flying has become a national pastime. It does not yet thrill the betting public so universally as does, say, the Grand National, but it produces more starters and a much higher percentage of finishes. At the present rate of increase, it will soon be impossible to accept all the entries for the King's Cup, unless eliminating trials are held.

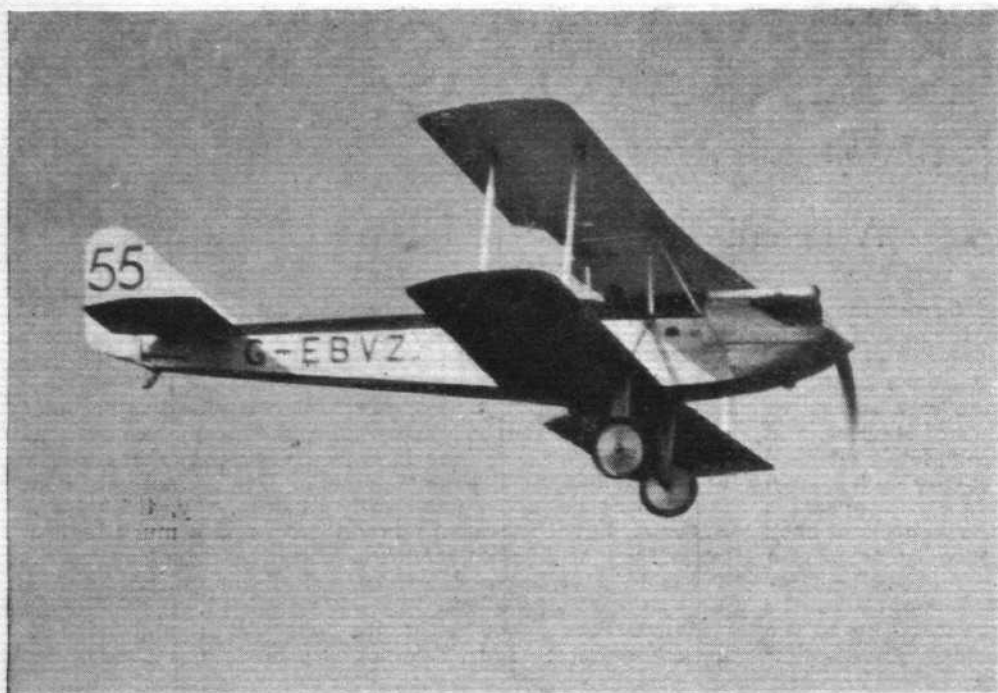
Hanworth is a good setting for the beginning and finish of a great air race. True, it is not so accessible as some other



THE WINNER: Miss Winifred Brown, tired but happy, gives the photographers a chance at Hanworth at the end of the race. (FLIGHT Photo.)

The weather did everything in its power to contribute to this result. Had clouds hung over the country as they did during that King's Cup won by the late F. L. Barnard in 1925, there would probably have been some 50 aeroplanes strewn about England, either damaged or undamaged. Had a strong wind been blowing, the powerful engines might have forged ahead and made the result very different from what it was. But an almost perfect summer day helped

places, but when one has arrived there one finds a pleasant spot. The club-house and the lawn, with deck chairs under the shade of the trees, lend a touch of summer luxury which few aerodromes can boast. After standing for nearly four hours with a July sun beating down on one's back, a little relaxation on the lawn proved very welcome. Air racing will really have come into its own when the public goes to Hanworth as eagerly as it now goes to Henley.



for he flew the "Gipsy II Moth," originally down for R. O. L. Muntz.

Another alteration was that Mr. and Mrs. A. S. Butler exchanged mounts, the latter flying the "Puss Moth."

Meanwhile the first batch of machines were lined up for the start, and at 7 a.m. sharp the "limit" man, W. H. Sutcliffe on the "Cirrus I-Moth," was sent on his way. A similar machine piloted by G. Vlasto followed 19 minutes later. Both appeared to find the air somewhat thin and bumpy in their take-off—in fact, for the first hour or so most of the competitors seemed to "unstick" rather stickily. Some 15 minutes later the third man, Flight-Lieut. Barrett on the Robinson "Redwing," got away, followed closely by A. L. Mortimer on the "Robin." Both these "Robs" had A.B.C. engines with a distinctive bark (or, rather, yap), seeming to class them apart from the other machines. The pretty little "Robin" took



THE END OF A PERFECT DAY : In the upper photograph Miss Brown's "Avian" is seen at the moment of crossing the finishing line. The lower picture shows Commander Perrin leading the winner in. (FLIGHT Photos.)

The Start

As might be expected, with an entry list of 101 machines, Hanworth aerodrome presented a very animated appearance round about the time for the start, 7 a.m. The weather was ideal, there was not a cloud in the sky and already the sun was making itself felt pretty strongly, while there was little if any wind.

There were quite a number of people present also, including a few of the "general public" in the various enclosures. Before starting on our duties of checking the departing competitors off we had a look at the list of starters to see what scratchings or alterations to handicaps had been made.

Only six minor changes were noticed in the handicaps as published in our last issue, but there were an "unlucky third teen" in non-starters. These were:—96, Lord M. A. Douglas Hamilton (Blackburn "Bluebird-Cirrus III"); 36, L. S. Snaith (Comper "Swift," A.B.C. "Scorpion"); 64, H. J. Andrews; 90, C. L. Pashley, and 31, Loel Guinness (all "Bluebirds IV Gipsy I"); 72, R. S. Ratray, who crashed his D.H. "Moth" the other week; 34, R. W. R. Trafford; 81, A. A. Nathan and 99, Miss F.M. Wood, all on "Gipsy I Moths"; 4, N. Comper ("Comper Swift-Pobjoy P"); 38, F. A. I. Muntz ("Gipsy I Moth"); and 11, W. L. Hope's D.H. "Puss Moth." Hope, however, was not out of the race,



Attention to Details : Miss Brown and her navigator studying their maps at Hanworth during the day before the race. (FLIGHT Photo.)

rather a long run to get off, but once in the air it hustled away on its course in fine style.

After an Avro "Avian" and a D.H. "Moth" (both "Cirrus II") had got away at short intervals, we came to the "bunches" and the starting livened up a bit. First of all a "Gipsy I-Bluebird" and a "Cirrus II-Moth," piloted respectively by Norman Blackburn and M. D. Scott, got away together, followed a few seconds later by another pair—H. Du Boulay and Col. the Master of Sempill, both on "Gipsy I-Bluebirds." The former got the lead, so that the second machine appeared to suffer from wash-wobble until well up and on its course.

It was only a few seconds later that Flight-Lieut. Waghorn got away on another "Gipsy I-Bluebird," with two more of the same breed, piloted by Flight-Lieut. H. V. Rowley and Sqdn.-Ldr. Orlebar, following simultaneously 30 seconds later.

The first of the fair sex amongst the competitors was the next away in Miss Winifred Brown, in her "Cirrus III-Avian," and then came a pair of "Moths," with I. R. Parker and J. B. Buckley up. Two "Spartans" (L. A. Strange, "Cirrus III." and F.O. McKenna,



The Reward : Sir Philip Sassoon presents the King's Cup to Miss Winifred Brown at Hanworth after the race. (FLIGHT Photo.)



A fast Second : Mr. Butler's "Gipsy Moth" being led in. On the left, Mr. Alan Butler leaving his machine after flying a very good race. (FLIGHT Photos.)

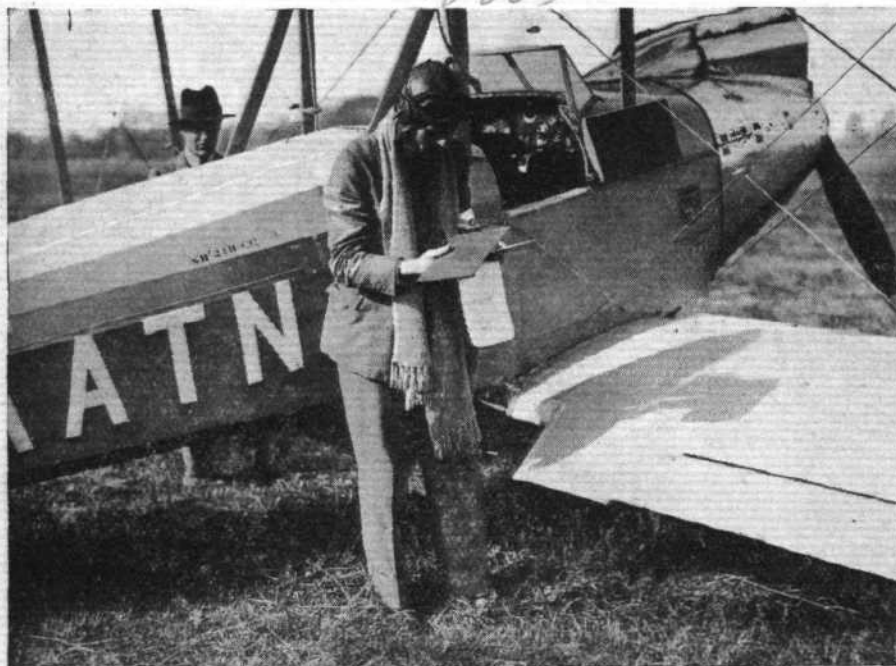


"Cirrus Hermes") were next sent away at intervals of a few minutes, and then the first bit of excitement occurred.

Sqdn.-Ldr. Slatter and J. W. Gillan were both booked to leave together at 8 hr. 34 m. 39 s. They, however, mistook the starter's signal for "get ready," and started off, but seeing the starter's frantic "wave back" both executed a smart and simultaneous right-hand turn (they were still on the ground, by the way!) back to the starting line—scattering the onlookers in all directions—just in time to make their official start.

By now the crowd had increased considerably, and competitors were sent off in rapid succession and pairs, and the going got exciting, although the majority of starts were without incident of note. A. Hamilton Gault, who paired with Derek Schreiber, on "Gipsy I-Moths," was a little late in getting away; Capt. Maxwell made a quick turn and got away from his partner, A. C. M. Jackaman (both on "Gipsy I-Moths"), while Flight-Lieut. J. B. Allen ("Gipsy-Moth") similarly got away from his partner G. Goodwin's "Avian."

Lady Bailey, when it was her turn to go away, made the



THIRD : Flight-Lieutenant Waghorn studying his map and, on the right, walking away from his "Bluebird." (FLIGHT Photos.)

best take-off up to then, leaving the ground after a very short run and turning smartly on to her course.

Other little incidents which livened up otherwise humdrum proceedings, were, first, when the 3-engined Avro V got away the right wing engine suddenly cut out and a mechanic had to jump out and start up again, resulting in a loss of about 2 minutes. Secondly, J. L. N. Bennett-Baggs was late in getting his "Avro Trainer" on to the line, taxiing up at speed some 2 minutes late and hurrying off without further ceremony. Apart from such incidents, matters were almost monotonously normal, but by 10 a.m. things assumed a more lively aspect with the line-up of the more interesting and larger machines. For instance, there was A. S. Butler's "Gipsy II Moth," fresh from the steam cleaner and presser, Prince George's

"Hawk Moth," with Flight-Lieut. Fielden up, and the pair of Hawker "Tomtits"—the Prince of Wales', piloted by Sqdn.-Ldr. Don, and the Rt. Hon. F. E. Guest's—all of which started within a few seconds of each other (two "Tomtits" together).

Then at intervals of a few seconds, followed W. L. Hope (with a magnificent take-off), on his "Gipsy Moth," Miss Winifred Spooner on the very pretty "Martlet," and the eight D.H. "Puss Moths," which were despatched within a space of 4 minutes.

Incidentally, two of the "Puss Moths" provided a little excitement—M. H. Findlay, who was paired with the first two "P.M.'s" failed to see the starter's signal to go, and did not leave until all the others had gone, some three minutes



THE SCENE AT THE START : Hanworth Air Park from above on Saturday morning. (FLIGHT Photo.)



WAITING FOR THE FLAG : Two "Avro Avian Sports" and a "Puss Moth" on the Starting Line.
(FLIGHT Photo.)

late. Secondly, as Miss D. C. Guest got away on the fall of the flag, her "Puss Moth" made a sudden swerve to the left, which she managed to correct only just in time to avoid running off the aerodrome into the rough.

The last of the 43 D.H. representatives having gone, there now remained only four competitors to go; these were the two Avro "Avian" monoplanes flown by F. Tomkins and T. N. Stack (with "Genet Major I" and "Cirrus Hermes" engines respectively), the "Segrave-Meteor" monoplane flown by Flight-Lieut. Atcherley—perhaps the most interesting machine in the race—and finally, the scratch machine, the huge Vickers "Vellore," flown by F. O. Summers, with its two Bristol "Jupiters," which sounded terrifying after the comparative purring of all the previous engines.

Thus the 88 competitors were all got away, without mishap, in 3 h. 41 m., and so we at once made our way out of the burning sun to the aforementioned shady lawn in front of the clubhouse for a rest before studying the progress of the competitors. As we strolled along, however, we were surprised to see the "Segrave-Meteor" come in and land, and thus learned of the first man out of the race—but more of this anon.

En Route

With so many competitors in the race, it was very difficult to follow their progress round the course with that clearness and anticipation as to the result one was able to do in previous King's Cup races. To keep a comprehensive table of the arrival times at the various controls was out of the question, as this would have entailed hours of hard work!

Even here, with the space at our disposal, we cannot detail the arrival of each competitor at each control, for although some dropped out of the running from time to time



THE SCRATCH MAN : The Vickers "Vellore III" gets away.
(FLIGHT Photo.)

it should be remembered that 61 flew round the course—quite a respectable number to deal with in itself. In our table on pages 774-775, however, we give the times of arrival at Manchester, from which the reader may worry out the relative positions of all the competitors.

All competitors except two, Mortimer on the "Robin," and Atcherley on the "Segrave Meteor," arrived at Bristol, with a few changes of position. Miss Brown, who had started 14th, was the sixth to reach Bristol, Waghorn and Orlebar following.

Three more, F. S. Symondson, Youell and Cantrill, dropped out before reaching Manchester, where Miss Brown had caught up to third place.

Out of the remaining competitors, 12 failed to reach



Neck and Neck : Mrs. Butler and Capt. de Havilland getting away in their "Puss Moths."
(FLIGHT Photo.)



An early-morning duet : The two "Bluebirds" entered by Lord Trenchard and Sir Philip Sassoon get the signal from Col. Lindsay Lloyd. (FLIGHT Photo.)

Newcastle, viz., Nos. 15, 16, 46, 48, 50, 71, 79, 82, 84, 86, 87, and 98. At Newcastle Miss Brown obtained the lead, which she retained throughout.

explaining what befell them, and to them we extend our grateful thanks. Others have not troubled, and if, inadvertently, we should give, in the following notes,



PRINCE GEORGE'S ENTRY STARTING : The De Havilland "Hawk Moth," piloted by Flight-Lieutenant Fielden, leaving Hanworth. (FLIGHT Photo.)

There were now 70 machines left in the race, and this number was reduced by four during the next leg to Hull, the absentees here being Nos. 22, 29, 60 and 68. The remaining machines all left Hull for the final hop home to Hanworth, and of these 60 were officially accounted for at the finishing line.

At Hanworth, while the competitors were flying round the course, National Flying Services presented an enjoyable Air Pageant to keep us amused until the finish of the big race. A description of this auxiliary affair will be found in the Private Flying Section of this issue, on page 783. And now for the finish of the King's Cup.

The Finish

The end of the great race was somewhat tame. Miss Winifred Brown crossed the line in her Cirrus III Avian sixteen minutes past 6, having right from the start gained on her rivals at a steady rate, and having obviously found a few m.p.h. which Capt. Dancy did not suspect. Miss Brown deserved her win, for she obviously had flown a perfect course.

Nearly a quarter of an hour separated the winner from the second man home, Mr. Alan S. Butler, in his beautifully streamlined "Moth" with Gipsy II engine. Mr. Butler put up the highest speed around the course, his average being

129.7 m.p.h. No. 3 was Flight-Lieut. Waghorn in a Blackburn "Bluebird," Gipsy I engine, who arrived less than 2 minutes behind Mr. Butler. Mrs. Butler, on a "Puss Moth" with Gipsy III engine, was fourth, some 7 minutes behind Waghorn. Mrs. Butler must also have flown a splendid course, as her average speed was very nearly as high as that of her husband, i.e., 129.6 m.p.h.

The rest of the competitors now came in at varying intervals, the last to be "clocked-in" being Mr. Parker on a "Moth" with Cirrus II engine. He arrived just after 7.30.

Those who Fell by the Way

It is a matter of considerable difficulty to learn with any degree of exactness what happened to the twenty-odd competitors who dropped out of the race for any reason. Those who returned to Hanworth could be interviewed, but of those who failed to return it was often difficult to obtain reliable news. Several competitors have been good enough to drop us a line

explaining what befell them, and to them we extend our grateful thanks. Others have not troubled, and if, inadvertently, we should give, in the following notes,

information which is not entirely accurate we would apologise beforehand, but at the same time would point out that they will largely have themselves to blame.

The first machine out of the race was the Segrave "Meteor," which returned about half an hour after starting. The starboard engine kept petering out, and then picking up again, and the indications were that the petrol supply system was at fault in some manner. Under the



The Avian Monoplane (Genet Engine) starting. (FLIGHT Photo.)

circumstances Atcherley and Stainforth wisely decided to return.

The next to fall out was the A.B.C. "Robin," which alighted at Old Sarum. The Robinson "Redwing" reached Manchester, but his compass gave trouble, and the machine returned to Hanworth. No. 1, a Moth, was timed in at Bristol, but nothing was heard of it after that. No. 42, Youell's "Desoutter," retired at Castle Bromwich, but details are lacking at the moment.

The Avro V was unable to get one of its engines to start at Manchester, and it was ultimately discovered that a breakage had occurred in the impulse starter. Too much time had been lost, and the machine returned to Hanworth. Mr. Cantrill's "Avian" (No. 85) turned over in a forced landing in Gloucestershire, and No. 91, Flight-Lieut. Oliver's "Avian," also made a forced landing in Glos. Norman Blackburn, No. 22, retired at Hull, while No. 100, Mr. Scott's "Moth," was "clocked-in" at Hull, and then heard of no more.

Col. Sempill's "Bluebird," No. 29, retired at Hull, and Col. Strange, on a "Spartan" (No. 17), left Hull for Hanworth, but did not finish the course. A similar fate overtook Sq.-Ldr. Slatter's "Bluebird" (No. 28). Mr. Ferguson's "Moth"

far as Buckinghamshire, but was then forced to land. Mr. Wilson, on the Desoutter II (No. 68), sustained damage, and was last heard of at Newcastle. Miss Guest and Capt. de Havilland, both on "Puss Moths," retired after reaching



The Limit Man : Mr. Sutcliffe starts the ball rolling at 7 a.m.
(FLIGHT Photo.)



THE TWO "TOMTITS" : The Prince of Wales' machine in the lead, closely followed by Captain Guest's entry. (FLIGHT Photo.)

(No. 39) also reached Hull, but failed to finish the course. No. 60, Flight-Lieut. Carnegie's "Moth," retired at Newcastle, and No. 48, Flight-Lieut. Addams' "Spartan Arrow," was last heard of at Manchester. Captain Maxwell (Moth No. 87) retired at Woodford, and Mr. Goodwin's "Avian" (No. 82) abandoned after reaching Manchester.

Mr. Miles, on his "Genet-Martlet" (No. 98), had plug trouble at Manchester, and found the plug points covered with metal, so that probably a piston ring had broken. He retired and returned to Hanworth. Another competitor who got no farther than Manchester was Mr. Chalmers, on Moth No. 46. Mr. Bennett Baggs, on the "Avro Trainer" (No. 70) got as

Manchester, as did also Mr. Tomkins on the Genet-engined Avian monoplane (No. 84).

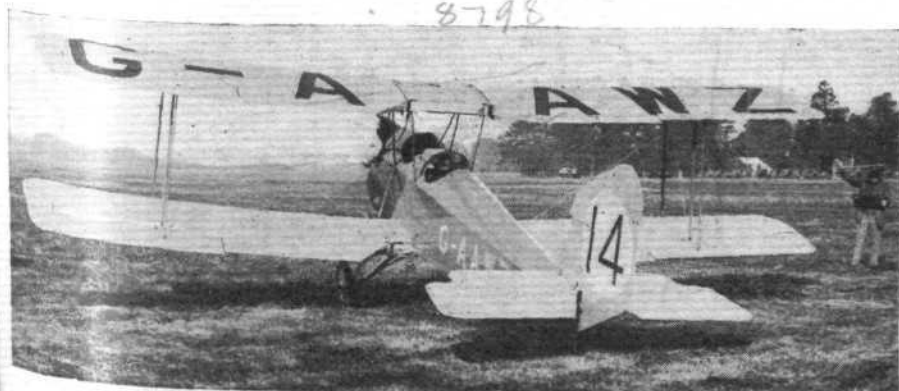
Might - Have - Beens

In a great race like that for the King's Cup, many little incidents are bound to crop up which change the final results considerably. This year's race was no exception. For example, the Spartan 3-seater piloted by F./O. McKenna was third at Hull. McKenna was under the impression that he then had 8 gallons in his tank, and asked for 10 gallons to be put in. Actually he could only have had about 5 gallons, for he ran out of petrol when within sight of Hanworth.

Filling up at a local garage, he finished the course, but, of course, he lost the third place which he would otherwise have gained.

Another competitor who might have done very much better, his performance being very good, was Mr. Percival on the Hendy 302. Up to Manchester, Percival had been averaging 129 m.p.h., but bad navigation on the last part of the race reduced the average for the whole course to about 121 m.p.h. Had the speed of 129 m.p.h. been maintained, by good course-keeping, Percival would have arrived at Hanworth at 6.27 and would have beaten Mr. Butler to second place.

Several competitors claimed that they had lost from 6 to 8 minutes
(Continued on page 778.)



A "Spartan Arrow" : Mr. Andrews waits for Col. Lindsay Lloyd to drop the flag. (FLIGHT Photo.)

TIMES AND SPEEDS IN THE KING'S CUP AIR RACE, JULY 5, 1930

Competitors marked § are eligible for the Siddeley Challenge Trophy.

No. and Ident. Mark	Entrant	Pilot	Machine	Engine	Handicap	Time of Starting	Arrival Manchester	Speed to Manchester	Arrival Hanworth	Place	Speed over whole course	
					h. m. s.	h. m. s.	h. m. s.	m.p.h.	h. m. s.		m.p.h.	
16 (G-EBOT)	D. M. K. Marendaz	W. H. Sutcliffe	D.H. Moth	Cirrus I	3 41 17	7 00 00	11 31 41	79.1	Failed to round turning point			
15 (G-EBVD)	A. G. Vlasto	George Vlasto	D.H. Moth	Cirrus I	3 21 49	7 19 28	11 46 47	80.1	Landed at Sherburn			
50 (G-AAUO)	Capt. P. G. Robinson	Flt.-Lieut. J. F. T. Barrett ..	Robinson "Redwing"	A.B.C. Hornet	3 06 38	7 34 39			Retired			
95 (G-AAID)	H. A. G. Howard	A. G. Mortimer	"Robin"	A.B.C. Scorpion II ..	3 03 42	7 37 35	Landed at Old Sarum					
§5 (G-EBWU)	Lieut. Caspar John, R.N. ..	Lieut. Caspar John, R.N. ..	Avro Avian	Cirrus II	2 46 46	7 54 31	11 57 45	89.5	18 54 56	28	90.3	
54 (G-EBOI)	P. A. Wills	P. A. Wills	D.H. Moth	Cirrus II	2 44 03	7 57 14	11 56 40	91.4	18 52 2	25	91.3	
96 (G-AAOB)	Lord M. A. Douglas Hamilton ..	Lord M. A. Douglas Hamilton	Blackburn Bluebird IV	Cirrus III	2 41 22	7 59 55	Non-starter					
36 (G-AARX)	Flt.-Lieut N. Comper	L. S. Snaith	Comper Swift	Scorpion II	2 28 22	8 12 55	Non-starter					
22 (G-AABV)	Capt. Norman Blackburn	Capt. Norman Blackburn	Blackburn Bluebird IV	Gipsy	2 27 07	8 13 40*	12 1 46	97.2	Retired at Hull			
64 (G-AATS)	Harold John Andrews	Harold John Andrews	Blackburn Bluebird IV	Gipsy I	2 27 07	8 13 40*	Non-starter					
90 (G-AASV)	Eric Gandar-Dower	C. L. Pashley	Blackburn Bluebird IV	Gipsy I	2 27 07	8 14 10	Non-starter					
100 (G-EBXG)	M. D. L. Scott	M. D. L. Scott	D.H. Moth	Cirrus II	2 27 07	8 14 10	12 11 22	92.6				
27 (G-AATO)	Norman E. Holden	Flt.-Lieut. G. G. H. Du Boulay ..	Blackburn Bluebird IV	Gipsy I	2 25 51	8 14 56*	12 10 48	92.7	19 0 19	33	93.2	
29 (G-AAIR)	Col. The Master of Sempill, A.F.C.	Col. The Master of Sempill ..	Blackburn Bluebird IV	Gipsy I	2 25 51	8 14 56*	12 15 8	91.3	Retired			
31 (G-AAUV)	Loel Guinness	Loel Guinness	Blackburn Bluebird IV	Gipsy I	2 25 51	8 15 26	Non-starter					
32 (G-AATN)	Robert McAlpine	Flt.-Lieut. H. R. D. Waghorn ..	Blackburn Bluebird IV	Gipsy I	2 25 51	8 15 26	11 56 57	101.3	18 29 48	3	99.5	
47 (G-AAUW)	Mrs. Robert Blackburn	Flt.-Lieut. H. V. Rowley	Blackburn Bluebird IV	Gipsy I	2 25 51	8 15 56†	12 13 21	92.8	19 10 25	42	91.3	
89 (G-AAUU)	Harald Peake	Sq./Ldr. A. H. Orlebar	Blackburn Bluebird IV	Gipsy I	2 25 51	8 15 56†	12 4 52	96.8	18 47 2	20	95.8	
§55 (G-EBVZ)	Miss Winifred S. Brown	Miss Winifred S. Brown	Avro Avian	Cirrus III	2 25 51	8 16 26†	11 55 0	102.8	18 15 27	1	102.7	
§2 (G-EBYV)	I. R. Parker	I. R. Parker	D.H. Moth	Cirrus II	2 23 22	8 17 55	12 13 18	93.5	19 30 13	60	88.2	
§8 (G-EBQW)	James Brian Buckley	James Brian Buckley	D.H. Moth	Cirrus III	2 23 22	8 17 55	12 4 53	97.8	18 44 39	16	96.8	
17 (G-AAGN)	John C. Ballardie	Lieut.-Col. L. A. Strange	Spartan	Cirrus III	2 16 03	8 25 14	12 13 47	92.1				
25 (G-ABAJ)	Sqdn.-Ldr. H. W. Woollett	F./O. McKenna	Spartan 3-seater	Cirrus Hermes	2 11 21	8 29 56	12 11 20	100.6	18 47 21	21	98.8	
28 (G-AAVG)	Marshal of the Royal Air Force, Lord Hugh Trenchard, G.C.B., D.S.O., D.C.L., LL.D.	Sqdn.-Ldr. L. H. Slatter	Blackburn Bluebird IV	Cirrus Hermes	2 06 38	8 34 39	12 9 1	105.0				
30 (G-AAOI)	Rt. Hon. Sir Philip Sassoon, Bart., P.C., G.B.E., C.M.G., M.P.	John W. Gillan	Blackburn Bluebird IV	Cirrus Hermes	2 06 38	8 34 39	12 25 45	95.7	19 9 11	41	95.2	
72 (G-EBZZ)	Capt. R. S. Rattray	Capt. R. S. Rattray	D.H. Moth	Cirrus II.	2 05 29	8 35 48	Non-starter					
§34 (G-ABAM)	Richard R. W. R. Trafford	Richard R. W. R. Trafford	D.H. Moth	Gipsy I	1 59 49	8 41 28	Non-starter					
39 (G-AAEF)	A. B. Ferguson	A. B. Ferguson	D.H. Moth	Gipsy I	1 58 42	8 42 35	12 25 4	100.4	Retired			
49 (G-ABAE)	Mrs. C. M. Young	Mrs. C. M. Young	D.H. Moth	Gipsy I	1 58 42	8 42 35	12 26 43	99.6	18 57 45	30	99.3	
§66 (G-EBPQ)	Lieut. L. G. Richardson, R.N. ..	Lieut. L. G. Richardson, R.N. ..	D.H. Moth	Cirrus III	1 57 36	8 43 11*	12 15 20	106.1	18 45 13	17	102.4	
52 (G-AAKI)	Richard Ince	Richard Ince	D.H. Moth	Gipsy I	1 57 36	8 43 41	12 35 49	95.1	19 23 50	56	94.1	
60 (G-AAEL)	Flt./Lieut. D. V. Carnegie	Flt./Lieut. D. V. Carnegie	D.H. Moth	Gipsy I	1 57 36	8 43 41	12 33 20	96.5	Retired			
14 (G-AAWZ)	W. A. Andrews	W. H. Dudley	"Spartan Arrow"	Gipsy I	1 55 23	8 45 54	12 40 3	94.2	19 25 2	58	94.3	
§1 (G-AARU)	F. S. Symondson	F. S. Symondson	D.H. Moth	Gipsy	1 54 18	8 46 29*	12 40 3	94.4				
§81 (G-AALJ)	Albert A. Nathan	Albert A. Nathan	D.H. Moth	Gipsy I	1 54 18	8 46 59	Non-starter					
101 (G-AASG)	O. F. MacLaren	Capt. G. A. Pennington	D.H. Moth	Gipsy I	1 54 18	8 46 59	12 35 41	96.8	19 30 1	59	93.6	
§35 (G-EBWT)	W. L. Runciman	W. L. Runciman	D.H. Moth	Cirrus III	1 52 07	8 49 10	12 29 11	101.4	18 59 18	32	100.4	
40 (G-AAAG)	Flt.-Lieut. F. G. Gibbons	Flt.-Lieut. F. G. Gibbons	Spartan	Cirrus Hermes	1 51 03	8 50 14	12 28 40	102.4				
§56 (G-AALK)	Capt. The Hon. F. E. Guest	F./O. H. Leech	D.H. Moth	Gipsy I	1 50 28	8 50 49	12 32 21	100.6	19 2 0	34	100.3	
6 (G-AAWU)	Arthur Stanley Preist	E. Fulford	D.H. Moth	Gipsy I	1 49 58	8 50 49*	12 31 41	101.4	18 59 11	31	100.9	
§7 (G-AAEW)	Derek Schreiber	Derek Schreiber	D.H. Moth	Gipsy	1 49 58	8 51 19	12 32 31	101.3	19 6 23	40	99.3	
12 (G-AAGA)	Lieut.-Col. A. Hamilton Gault ..	Lieut.-Col. A. Hamilton Gault ..	D.H. Moth	Gipsy I	1 49 58	8 51 19	12 35 19	99.2	19 24 0	57	95.6	
93 (G-AAVF)	Wm. E. Rootes	Sq./Ldr. J. W. Woodhouse	Blackburn Bluebird IV	Gipsy II	1 48 54	8 51 53*	12 33 7	100.7	19 6 11	39	99.6	
§59 (G-EBQN)	P. N. G. Peters	Flt.-Lieut. T. B. Bruce	Avro Avian	Cirrus III	1 48 54	8 51 53*	12 27 0	104.4	18 39 33	8	105.9	
83 (G-AABS)	R. H. Dobson	D. S. Green	Avro Avian	Genet Major I	1 48 54	8 52 23	12 25 1	105.7	18 37 5	5	106.4	
97 (G-AAFH)	Geo. G. Parnall	H. A. Presto	Parnall Elf	Cirrus Hermes	1 48 54	8 52 23	12 27 39	104.3	18 42 45	15	105.0	
§13 (G-AABO)	T. H. Naylor	T. H. Naylor	D.H. Moth	Gipsy I	1 46 47	8 54 30	12 31 56	102.8	18 54 13	27	102.8	
48 (G-AAWY)	Flt.-Lieut. J. R. Addams	Flt.-Lieut. J. R. Addams	"Spartan Arrow"	Cirrus Hermes	1 46 47	8 54 30	12 42 45	97.0	Retired			

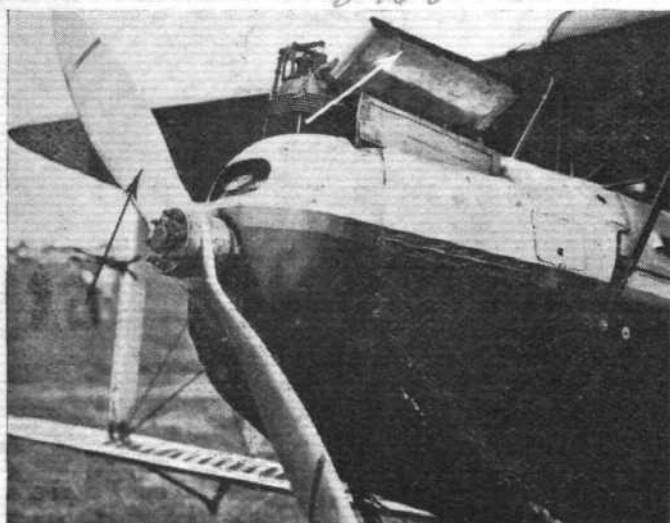
No. and Ident. Mark	Entrant	Pilot	Machine	Engine	Handicap			Time of Starting			Arrival Manchester			Speed to Manchester			Arrival Hanworth			Place	Speed over whole course	
					h.	m.	s.	h.	m.	s.	h.	m.	s.	m.p.h.	h.	m.	s.	m.p.h.			m.p.h.	
88 (G-AAJO)	G. P. Fairbairn	G. P. Fairbairn	D.H. Moth	Gipsy I	1	45	44	8	55	33	12	30	40	104.4	19	19	6	52			79.5	
3 (G-EBYZ)	A. G. G. Marshall	A. G. G. Marshall	D.H. Moth	Gipsy I	1	44	41	8	56	36	12	36	47	101.3	19	3	38	35			101.1	
37 (G-EBRQ)	J. Wellworth	J. Wellworth	Westland Widgeon III	Genet III	1	42	36	8	58	41	12	25	51	109.1	19	18	24	49			98.3	
18 (G-AADE)	C. S. Napier	C. S. Napier	Westland Widgeon	Gipsy I	1	40	33	9	00	44	12	38	38	102.6	19	18	44	50			98.7	
78 (G-ABAI)	Capt. R. Douglas	Capt. R. Douglas	D.H. Moth	Gipsy I	1	38	30	9	02	47	12	40	24	102.8	19	17	36	45			99.4	
87 (G-AAJS)	Capt. I. C. Maxwell	Capt. I. C. Maxwell	D.H. Moth	Gipsy I	1	38	30	9	02	47	12	46	53	99.2	Retired							
92 (G-AADX)	A. C. M. Jackaman	A. C. M. Jackaman	D.H. Moth	Gipsy I	1	37	30	9	03	47	12	43	14	101.8	19	14	1	43			100.4	
53 (G-ABBA)	Lord Wavertree	Flt.-Lieut. S. B. Allen	D.H. Moth	Gipsy I	1	36	29	9	04	48	12	39	51	104.5	18	52	32	26			105.7	
82 (G-AACV)	Geoffrey Goodwin	Geoffrey Goodwin	Avro Avian	Hermes I	1	36	29	9	04	48	12	43	30	102.1	Retired							
51 (G-AAWR)	C. M. Pickthorn	C. M. Pickthorn	D.H. Moth	Gipsy I	1	35	59	9	05	18	12	37	55	105.8	18	48	30	22			106.9	
94 (G-AAHI)	H. N. S. Norman	H. N. S. Norman	D.H. Moth	Gipsy I	1	35	29	9	05	48	12	45	15	101.7	19	5	5	38			102.9	
21 (G-AACC)	Capt. Norman Blackburn	T. Rose	Blackburn Bluebird IV	Cirrus Hermes	1	35	29	9	05	48	12	30	10	104.6	18	37	19	6			109.8	
99 (G-AAGI)	Miss F. M. Wood	Miss F. M. Wood	D.H. Moth	Gipsy I	1	33	29	9	07	48	Non-starter											
98 (G-AAVD)	Walter R. Westhead	F. G. Miles	Martlet	Genet	1	32	30	9	08	47	12	45	15	102.8	Retired							
61 (G-AAPY)	Charles Bernard Wilson	P. E. G. Sayer	Desoutter I	Cirrus Hermes	1	30	32	9	10	45	12	39	41	108.0	18	49	4	23			108.4	
19 (G-ABBE)	Capt. H. H. Balfour, M.C., M.P.	Capt. H. H. Balfour	"Spartan Arrow"	Gipsy II	1	30	32	9	10	45	12	52	5	100.7	19	19	20	54			100.5	
23 (G-AAEE)	Hon. Lady M. Bailey, D.B.E.	Hon. Lady M. Bailey	D.H. Moth	Gipsy I	1	28	35	9	12	12*	12	49	27	103.2	19	19	10	53			101.2	
42 (G-AATK)	A. M. Desoutter	A. B. H. Youell	Desoutter I	Cirrus Hermes	1	28	35	9	12	42	Retired at Castle Bromwich											
71 (G-AASO)	Rt. Hon. Sir Philip Sassoon, Bt., P.C., G.B.E., C.M.G., M.P.	Flt./Lieut. S. L. G. Pope	Avro V	Genet Major I (3)	1	28	35	9	12	42	Retired at Manchester											
67 (G-EBRM)	R. G. Cazalet	R. G. Cazalet	Westland Widgeon III	Cirrus Hermes	1	23	48	9	17	29	12	41	38	111.3	18	46	25	19			110.5	
73 (G-AAYG)	Sq./Ldr. H. A. Whistler	Sq./Ldr. H. A. Whistler	D.H. Moth	Gipsy II	1	21	55	9	19	22	12	49	12	107.8	19	5	2	37			106.2	
46 (G-AAYY)	J. W. P. Chalmers	J. W. P. Chalmers	D.H. Moth	Gipsy II	1	21	55	9	19	22	12	49	39	106.9								
70 (G-AAKT)	Roy Chadwick	J. L. N. Bennett Baggs	Avro Trainer	Mongoose IIIA	1	20	59	9	20	18	12	49	7	108.3								
75 (G-AASL)	G. de Havilland, Jr.	G. de Havilland, Jr.	D.H. Moth	Gipsy II	1	17	17	9	24	00	12	53	56	107.6	19	18	57	51			103.9	
4 (G-AAZF)	Gerard Fane	Gerard Fane	Comper Swift	Pobjoy, Type "P"	1	17	17	9	24	00	Non-starter											
24 (G-AAGO)	A. E. Chambers	H. T. Andrews	Spartan	Gipsy II	1	08	19	9	32	58	13	2	41	107.7	19	18	4	47			106.3	
58 (G-AADA)	John D. Irving	John D. Irving	D.H. Moth	Gipsy I	1	06	34	9	34	43	12	58	2	111.9	19	3	55	36			111.7	
38 (G-EBQH)	F. A. I. Muntz	F. A. I. Muntz	D.H. Moth	Gipsy I	0	59	44	9	41	33	Non-starter											
68 (G-AAZI)	Rt. Hon. Lord Rothermere	C. B. Wilson	Desoutter II	Gipsy III	0	53	08	9	48	09	12	59	33	120.5	Crashed							
85 (G-AAYU)	A. J. A. W. Barr	J. C. Cantrill	Avro Avian	Cirrus Hermes	0	51	31	9	49	46	Forced landing near Gloucester											
91 (G-AAWI)	Lady Wakefield	Flt./Lieut. John Oliver	Avro Avian	Cirrus Hermes	0	48	19	9	52	58	Forced landing near Gloucester											
76 (G-AAXG)	Mrs. A. S. Butler	A. S. Butler	D.H. Moth	Gipsy II	0	42	06	9	59	11	13	1	10	128.6	18	27	38	2			129.7	
41 (G-AAHJ)	Capt. F. W. Ewart Morgan	S. A. Thorn	Avro Avian Mark IV	Cirrus Hermes	0	46	45	9	54	32	13	9	35	117.7	18	57	41	29			117.9	
63 (G-AAVT)	Mrs. D. Lawley-Gibbs	Capt. Edgar W. Percival	Hendy 302	Cirrus Hermes	0	43	38	9	57	39	12	58	54	129.1	18	49	35	24			121.5	
74 (G-AAUZ)	H.R.H. the Prince George, K.G.	Flt./Lieut. E. H. Fielden	D.H. Hawk Moth	Armstrong Siddeley Lynx VI.	0	40	34	10	00	13*	13	3	27	128.6	18	39	28	7			126.2	
33 (G-AALL)	H.R.H. The Prince of Wales, K.G.	Sqdn.-Ldr. D. S. Don	Hawker Tomtit	Mongoose IIIA	0	40	34	10	00	43	13	10	27	122.3	18	46	24	18			123.4	
57 (G-ABAX)	Capt. The Hon. F. E. Guest	Capt. The Hon. F. E. Guest	Hawker Tomtit	Mongoose IIIA	0	40	34	10	00	43	13	5	46	125.7	18	40	44	12			125.5	
44 (G-AAHP)	W. L. Hope	W. L. Hope	D.H. Moth	Gipsy II	0	37	33	10	03	14*	13	2	5	131.6	18	40	22	10			126.7	
9 (G-AAXW)	Roy Faulkner	Capt. C. D. Barnard	D.H. Puss Moth	Gipsy III	0	37	33	10	03	44	13	7	59	126.6	18	42	5	13			127.6	
11 (G-AAYD)	W. L. Hope	W. L. Hope	D.H. Puss Moth	Gipsy III	0	37	33	10	03	44	Non-starter											
65 (G-AAYZ)	Capt. The Hon. F. E. Guest	Miss Winifred Spooner	Martlet	Gipsy II	0	36	04	10	05	13	13	10	8	126.1	18	42	11	14			125.5	
20 (G-AAFA)	M. H. Findlay	M. H. Findlay	D.H. Puss Moth	Gipsy III	0	34	36	10	06	11*	13	10	10	126.9	19	21	36	55			114.4	
45 (G-AAXT)	Norman E. Holden	E. G. Hordern	D.H. Puss Moth	Gipsy III	0	34	36	10	06	11*	13	13	37	123.9	19	15	7	44			116.4	
80 (G-AAXZ)	Lieut.-Comm. Glen Kidston, R.N.	Lieut.-Comm. Glen Kidston, R.N.	D.H. Puss Moth	Gipsy III	0	34	36	10	06	41	13	9	26	128.2	18	40	40	11			127.7	
86 (G-AAZP)	Miss D. C. Guest	Miss D. C. Guest	D.H. Puss Moth	Gipsy III	0	34	36	10	06	41	13	35	46	118.0	Retired							
26 (G-ABBH)	Lord Wakefield of Hythe	Captain H. S. Broad	D.H. Puss Moth	Gipsy III	0	33	52	10	06	55*	13	10	6	127.5	18	39	40	9			128.3	
77 (G-AAXL)	A. S. Butler	Mrs. A. S. Butler	D.H. Puss Moth	Gipsy III	0	33	52	10	07	25	13	8	22	129.5	18	26	14	4			129.6	
79 (G-AAXO)	Capt. G. de Havilland	Capt. G. de Havilland	D.H. Puss Moth	Gipsy III	0	33	52	10	07	25	13	8	0	130.0	Retired							
84 (G-AAYV)	J. D. Siddeley	F. Tomkins	Avro Avian Monoplane	Genet Major I	0	31	41	10	09	36	13	18	17	123.5	Retired							
69 (G-AAYW)	Frank Hough	T. N. Stack	Avro Avian Monoplane	Cirrus Hermes	0	20	28	10	20	49	13	24	35	127.1	19	18	19	48			119.7	
10 (G-AAXP)	Andrew P. Holt	Flt.-Lieut. R. L. R. Atcherley	Segrave-Meteor	Gipsy III (2)	0	04	54	10	36	23	Returned to Hanworth											
43 (G-AASW)	Sir Robert McLean	F./O. J. Summers	Vickers Vellore	Bristol Jupiter XI (2)	Scratch	10	41	17			13	46	53	125.5	19	17	45	46			126.8	

* Starting 30 seconds early.

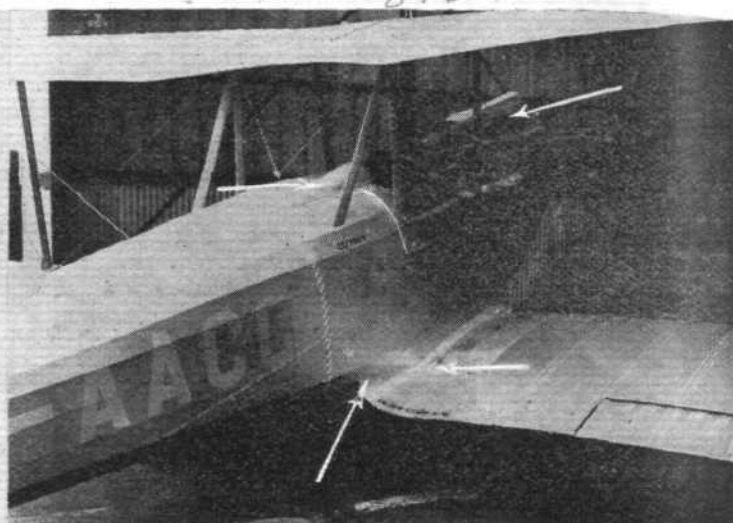
† Starting 30 seconds late.

‡ Starting 1 minute late.

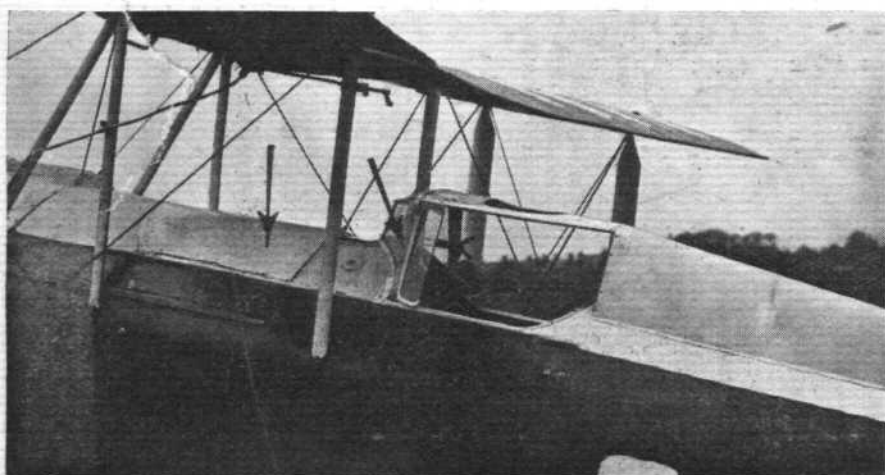
IN SEARCH OF "KNOTS"



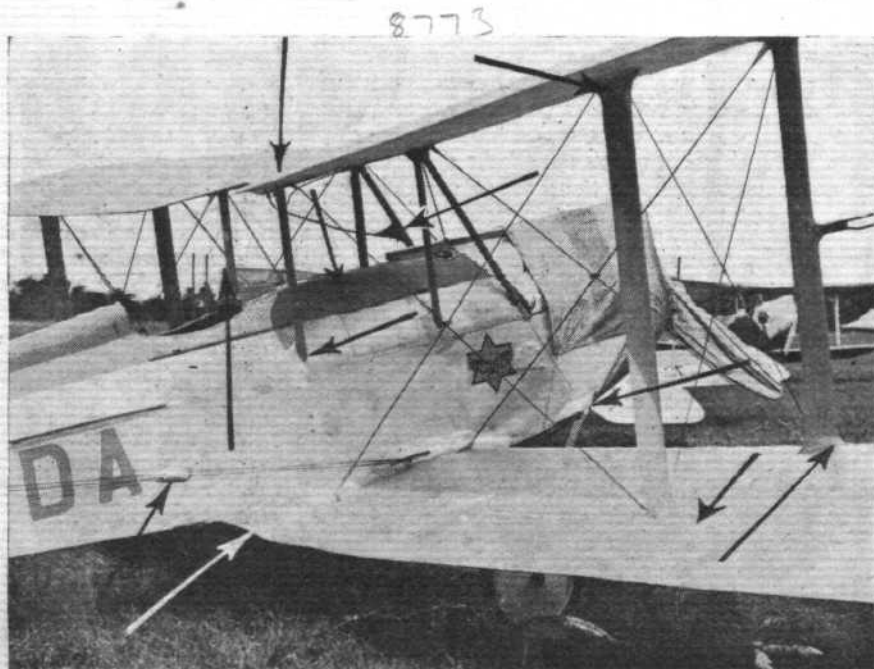
Lieut. Richardson's "Moth" (Cirrus III), No. 66, had a Fairey metal propeller, and a complete metal fairing around the rather long exhaust stubs (102.36 m.p.h.). (FLIGHT Photo.)



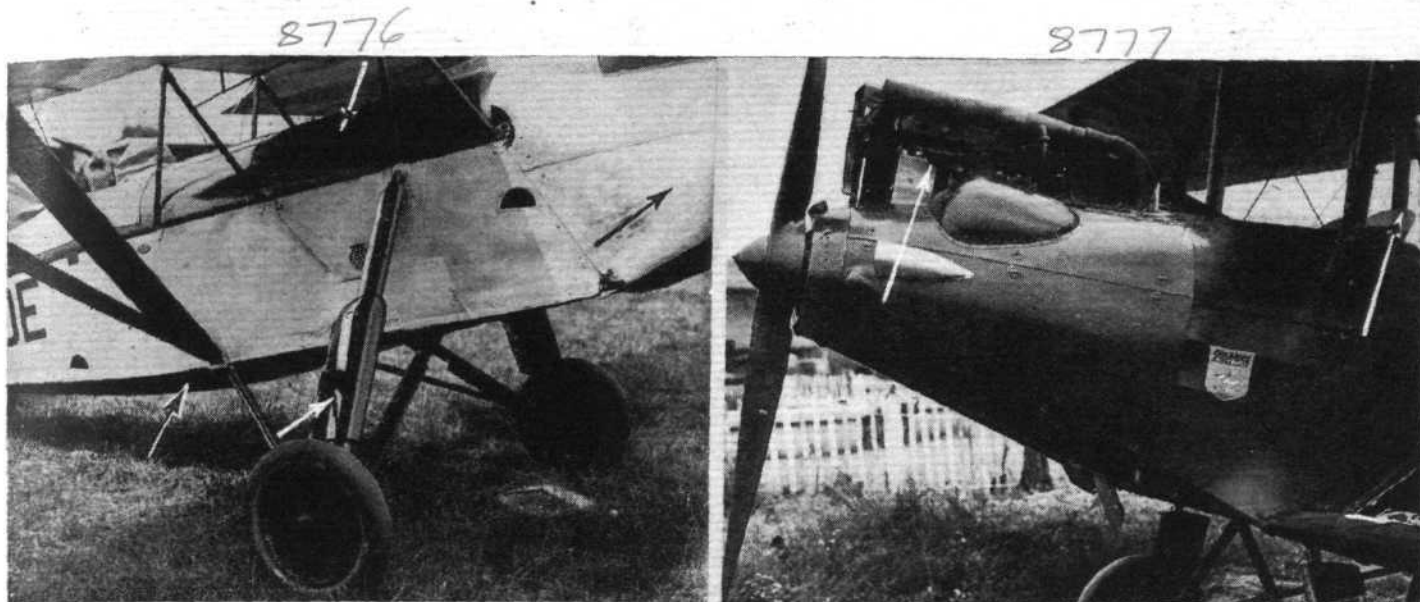
On Tommy Rose's "Bluebird" (Hermes), No. 21, the exhaust stubs were faired in, the passenger's side of the cockpit was covered over, the pilot's head streamlined, and the lower wings faired into the fuselage (109.82 m.p.h.). (FLIGHT Photo.)



Nigel Norman's "Moth" (Gipsy I), No. 94, had passenger's cockpit covered, and a small coupe top over pilot's cockpit, with head fairing carried right back to the rudder. This machine was originally a standard Coupé Moth, and Mr. Norman has removed the front portion and inserted a windscreen with side wings in front of the pilot (102.88 m.p.h.). (FLIGHT Photo.)



Mr. Irving's "Moth" (Gipsy I), No. 58, had a thin centre-section with shallow gravity tank, long narrow windscreen, and head fairing. Wing roots faired into fuselage. Strut and wire ends and other excrescences faired. Mr. Irving had gone to considerable trouble to "clean up" his machine in every possible way, and his speed around the course (111.67 m.p.h.) showed that he achieved good results by his careful attention to these details. (FLIGHT Photo.)



Mr. Napier's "Widgeon" (Gipsy I), No. 18, had passenger's cockpit covered in, a fairing to the bottom of fuselage to cover controls, new fairing over compression legs, and neat engine cowling. (98.67 m.p.h.) (FLIGHT Photo.)

Sqdn.-Ldr. Woodhouse's "Bluebird" (Gipsy II) No. 93, had a pointed nose and small windcreens. Speed around course 99.59 m.p.h. (FLIGHT Photo.)

Mr. Butler's "Moth" (Gipsy II), No. 76, was "cleaned up" with extreme care. The thin centre-section was mounted on Vee struts and braced by vertical wires. The small undercarriage was carefully faired, and all strut and wire ends faired into the surfaces. The engine cowling completely covered the engine, with very small front openings. The cowling line continued aft over the passenger's cockpit, and merged from pilot's cockpit very cleanly into the tail. Mr. Butler averaged 129.7 m.p.h. around the course, thus gaining award for greatest speed. (FLIGHT Photo.)



Mr. Andrews' "Spartan" (Gipsy II), No. 24, had a neat engine cowling, the passenger's cockpit covered over, the pilot's fairing raised, and a very small windscreen (106.32 m.p.h.) (FLIGHT Photo.)

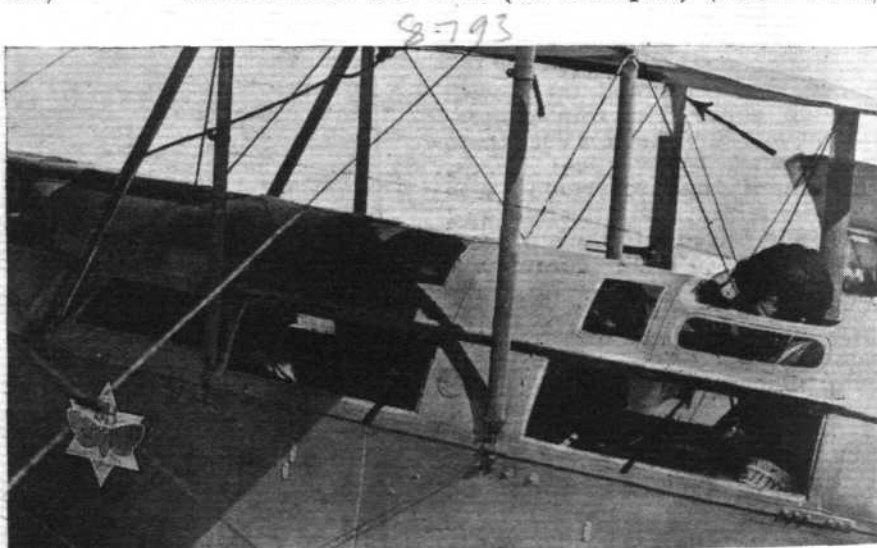
Mr. Thorn's "Avian" (Hermes), No. 41, had very short exhaust stubs, metal fairings to strut ends, wing roots faired into fuselage, passenger's cockpit covered, and a long narrow windscreen for the pilot. (117.95 m.p.h.) (FLIGHT Photo.)



The Segrave "Meteor" (2 Gipsy III), No. 10, was flown in its standard form. Note neat engine cowling. Defective fuel feed compelled this interesting machine to return to Hanworth. (FLIGHT Photo.)



Captain Stack's "Avian Monoplane" (Hermes), No. 69, had wing roots faired into fuselage, well-creased Oxford bags and very small wheels. The windscreen was reduced to a minimum. (119.72 m.p.h.) (FLIGHT Photo.)



Mr. Pickthorn's "Moth" (Gipsy I), No. 51, showed most care in streamlining the fuselage. But the struts were faired into the surface with metal gaiters. (106.92 m.p.h.) (FLIGHT Photo.)

King's Cup Race.

(Concluded from page 773.)

at controls, owing to the fact that there was no one to start them off again after their 40 minutes' stop.

The "Spartan" interchangeability feature was made good use of in the case of Fl.-Lt. Gibbons' machine, G-AAMG (No. 40). While waiting for the flag, this machine was charged by a restive "Moth," which chewed up the starboard ailerons. A Spartan engineer took Gibbons' left top aileron and fitted it to the bottom right-hand wing, Gibbons finishing the course without ailerons to the top planes.

"Mr. Wellworth" changed, single-handed, a cylinder on his Genet engine, and finished the course. But the delay was too much to be made up. There are probably many other cases, but these are just a few that have come to our notice.

Items

Capt. Stack was somewhat delayed at Manchester, his engine cowling having shown signs of working loose.

The "Pobjoy"-engined "Swift" was kept out of the race by oil-frothing trouble on its way down to Hanworth. This sounds like too small an oil tank.

Tommy Rose's very carefully streamlined "Bluebird" was somewhat delayed owing to engine cowl trouble, but Tommy put it right and carried on. His speed to Manchester was only 104.6 m.p.h., but his average for the whole course was 109.8 m.p.h., so that he must have hustled after putting his cowl right. As it was he was 6th, but if it had not been for the cowl he would have done better and likely been in the first three.

In the King's Cup Race 22 competitors wore Russell parachutes.

Cirrus Aero Engines, Ltd., have made a present of the Cirrus III engine to Miss Brown.

Some of the Hermes engines had been fitted with a new Claudel carburettor, which appears to have given a considerable improvement. Two Hermes engines at least were running at 2,300 r.p.m. the whole way around.

Trusty Helpers

In a big race such as the King's Cup the success achieved by the winner is helped to no small extent by the efficiency of the winning machine, its engine, and the various components and "services" associated therewith. In the case of this year's victor, Miss Winifred Brown—the first woman to have won the King's Cup—who also claims the Siddeley Trophy, we think it only fair to mention some of these helpers.

The Avro "Avian" biplane with its "Cirrus III" engine are, of course, known factors, although the most important, and we need not dwell further here upon their fine performance.

We should note, however, that Miss Brown "fitted and forgot" "K.L.G." plugs in her "Cirrus," while the "B.T.H." magneto never once forgot the plugs. The smooth running of the engine was further assisted by "Castrol," as it has done on so many other occasions. "B.P." petrol was the fuel used by Miss Brown throughout, and this also lived up to its reputation. As regards the machine itself, it only remains to mention that it was doped with "Titanine," and Palmer Aero wheels and tyres were fitted.

8965



The Handley Page new aerodrome at Radlett, Hertfordshire. The road on the far side of the hangar is the Roman road, Watling Street. (FLIGHT Photo.)

HANDLEY PAGE NEW AERODROME

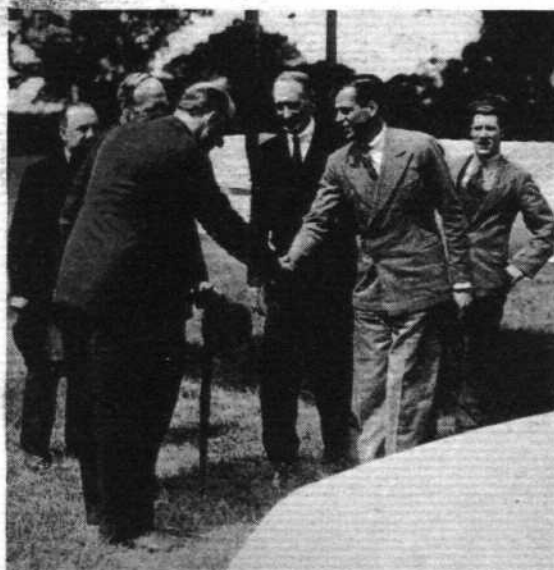
Prince George Flies to Radlett

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H. R.H. PRINCE GEORGE flew from Northolt to Radlett in a Wapiti, escorted by a flight of No. 41 (Fighter) Squadron, on Monday, July 7, to open the Handley Page new aerodrome. His Royal Highness was received by the directors of the company. Among those present were Lord Thomson, Air Minister, Mr. Montague, Under Secretary for Air, Lord Trenchard, Air Marshal Sir John Higgins, Air Vice-Marshal Sir Edward Ellington, Sir Walter Nicholson, Sir Sefton Brancker, Air Commodore F. Vesey Holt, Sqdn.-Ldr. A. D. Shearer, Flight-Lieut. Harman, Dr. G. Mertens, Dr. S. G. Lachmann, Mr. Ide, Dr. Joseph Ames, and several foreign air attachés. The party then entered a hangar where beside the fuselage of one of the new 40-seater passenger aeroplanes stood the battered remains of the 1910 H.P. monoplane once known as the "Yellow Peril."

Mr. Handley Page, in his speech, recalled that the company started



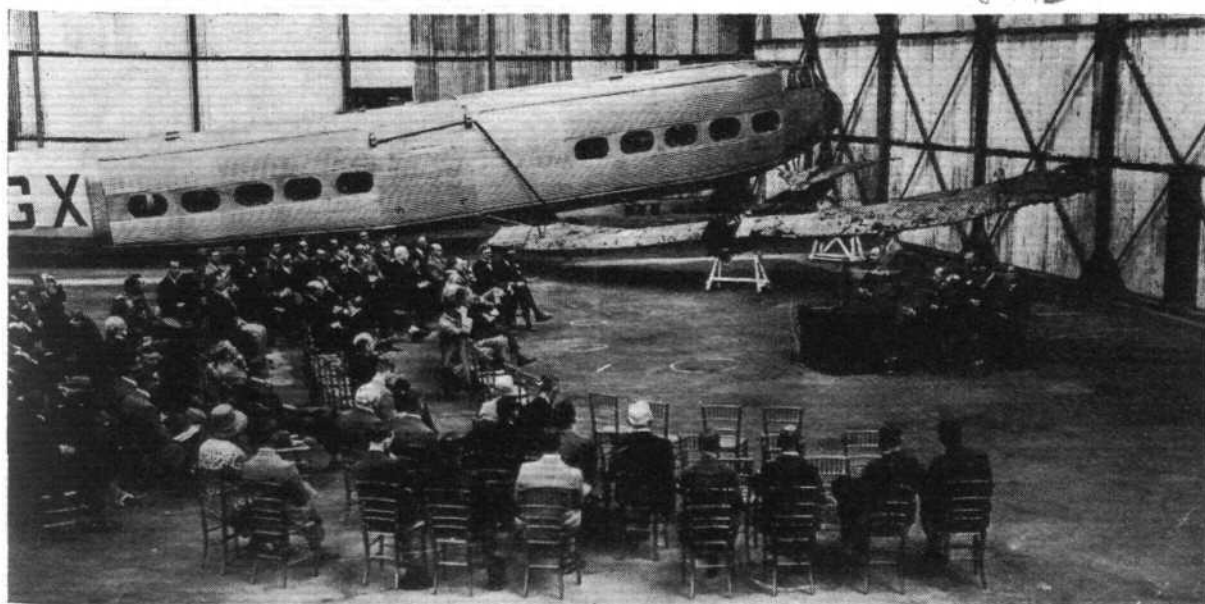
H.R.H. Prince George received by Mr. Handley Page on alighting from his Wapiti. Lord Thomson is in the centre. Mr. Montague on the left, and Mr. S. R. Worley is behind Mr. Handley Page. (FLIGHT Photo.)

active life 21 years ago at Barking. It had subsequently moved to Hendon, to Kingsbury, and to Cricklewood. The building value of the aerodrome at Cricklewood had now become so high that they had moved to Radlett. Their new aerodrome measured 1,700 by 700 yards, and should be large enough for even un-slotted machines to land in it. There was a layer of gravel underneath. It was free from fog. On one side of it ran the old Roman road called Watling Street, on the other ran a railway line. These two examples of archaic means of transport were a contrast to the new means of transport exemplified by the aerodrome.

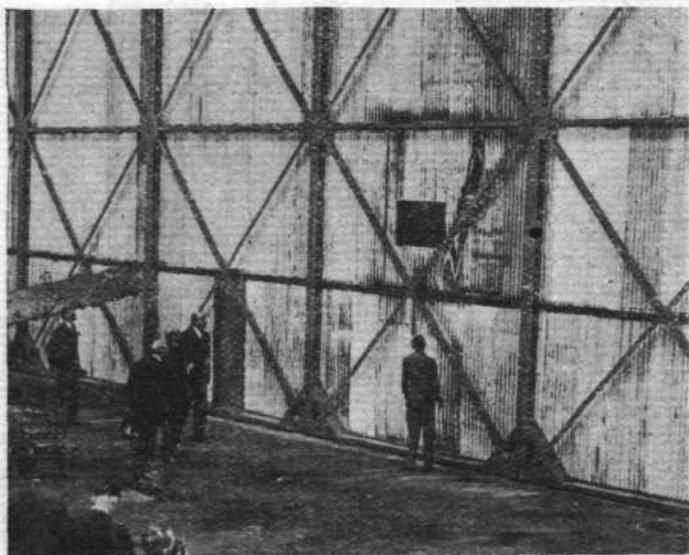
Prince George then said:—

"Mr. Chairman, My Lords, Ladies and Gentlemen: It is particularly encouraging that the firm of Handley Page should be celebrating its twenty-first birthday by acquiring this new aerodrome. It is a sign that aviation is continuing its rapid advance and that the construction of air-

8972



Prince George making his speech. The remains of the 1910 "Yellow Peril" stand beside the fuselage of a 40-seater passenger machine. (FLIGHT Photo.)



Prince George unveils the tablet and declares the aerodrome open. (FLIGHT Photo.)

communications and the train to the transport of heavy goods. For journeys of more than 50 or 60 miles passengers will go by the most direct and the quickest route—that is by air.

"I congratulate the firm of Handley Page upon the attainment of its majority, and I now declare the Radlett Aerodrome open."

The Prince then unveiled a tablet on the wall of the hangar and declared the aerodrome open.

The hangar doors were then opened, and Squadron-Leader England taxied the Gugnunc rapidly through them and took off almost as soon as he had got outside. He gave a very pretty exhibition of slow flying.

The "Clive" troop-carrier then took some of the guests up for a short flight, but was not able to cope with all who would have liked a view of an attractive stretch of country on a fine day. Capt. Broad next gave an aerobatic exhibition in a "Puss Moth."

The new Handley Page night-bomber, with two Rolls Royce "F" engines, was then taken up and put through its paces. Though very unusual in appearance, the long slim fuselage looked very well in the air, and the machine (which, of course, was slightly loaded) showed a really remarkable speed range. It landed almost as slowly as the Gugnunc, and pulled up dead after a run of very few yards.

The party was then entertained to lunch in a marquee.



The "Gugnunc" taxis hard out of the shed and promptly takes off. (FLIGHT Photo.)

craft is taking its place among the country's most important industries.

"A few weeks ago I had the pleasure of opening the new Municipal Air Port at Bristol. I travelled down from London by air, and in spite of extremely bad weather with low cloud and rain, my pilot was able to land me at Filton punctually according to the prearranged timetable. During the journey I could not help comparing the curious machines in the early days of aviation with the one that I was in; the rapidity of progress that has been made seemed to me extraordinary, and in reviewing that progress it is impossible to overlook the work of this firm, for some of the first aeroplanes to be built bore your company's name. Ever since the company was formed in 1909 it has especially directed its attention to two branches of development—air safety and the evolution of the large-size aircraft—and the progress made in these two branches is largely due to the successful results it has obtained.

"This aerodrome is another of the many indications that the passenger traffic of the future will go by air. Already the pressure upon ground space in this country, chiefly caused by building operations and road construction, is becoming excessive.

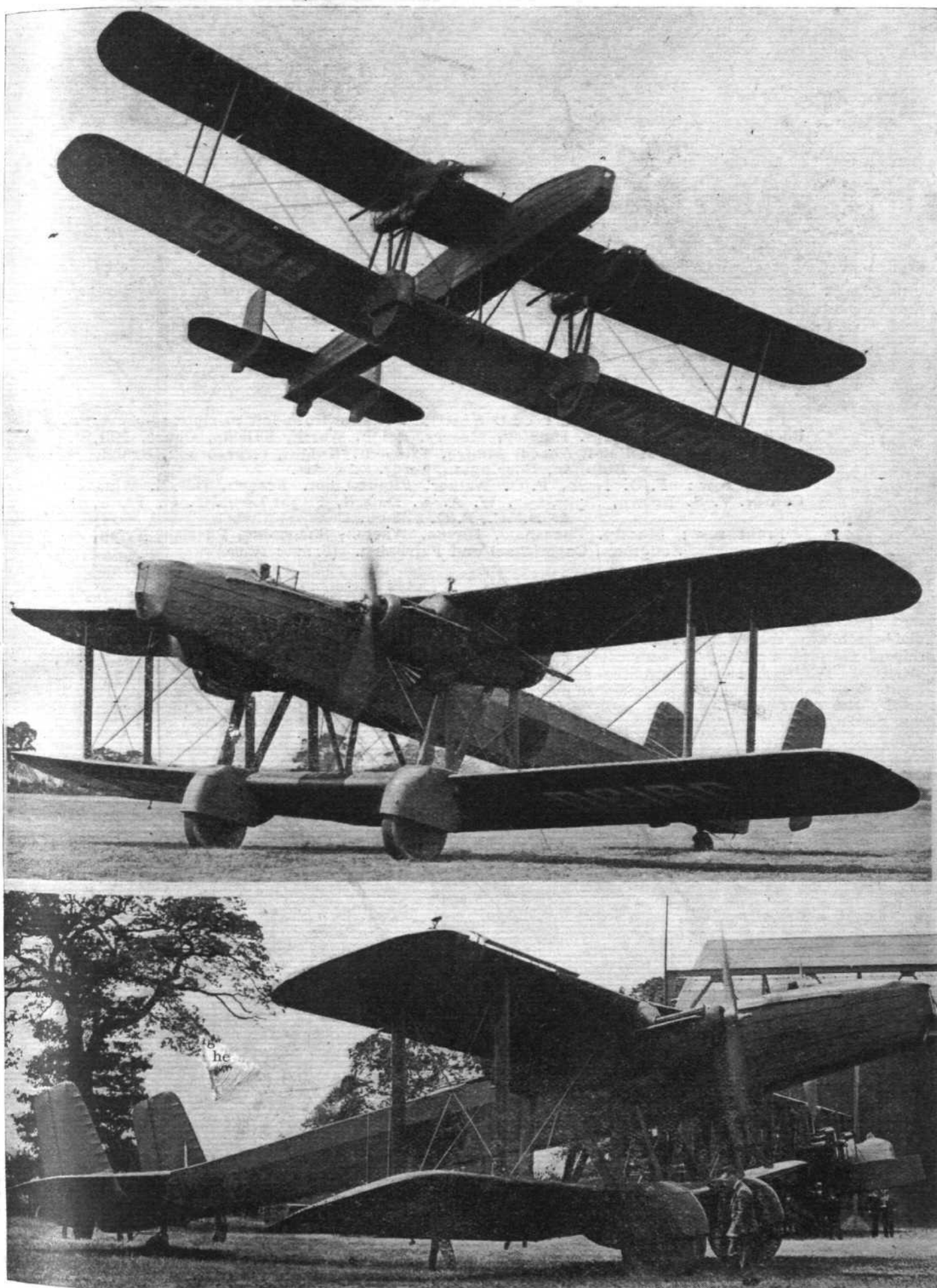
"The most likely way in which, it seems to me that the pressure can be relieved in the future is by travellers taking to the air. I can well imagine that the time is not far off when only heavy goods will travel by land and when, whether by private aeroplane or by public air liner, we shall all travel by air. Every new aerodrome that is opened brings that time closer. Radlett may one day become an important terminus for aircraft coming down from the North. It will certainly be extensively used by private aeroplane owners.

"The popularity of air travel now depends more upon the aerodrome than upon the aircraft. With London and our other great cities well served with aerodromes it will be possible for the motor car to be devoted primarily to terminal



Prince George is shown the new night bomber with its streamlined wheels. (FLIGHT Photo.)

TWENTY-ONE YEARS' DEVELOPMENT.



THE LATEST HANDLEY-PAGE NIGHT BOMBER: The engines are Rolls-Royce "F" type. Note the placing of the fuselage under the top plane. (FLIGHT Photos.)

CAMBRIDGE UNIVERSITY AIR SQUADRON



C.U.A.S. IN CAMP AT OLD SARUM : Names from left to right :—
Back row :—Flight-Sergt. Hartley, Messrs. Leigh, Worth, Shields, Chase, Hill, Stewart, Moore, Holland, Ahern, Munro, Mitchell, Knight, Grazebrook, Brand, Bullman, Barrington, Sergt. Edwards.
Middle row : F./O. Nash, F./O. Walker, Flight-Lieut. French, D.F.C., Wing Comdr. V. S. Brown, Sqdn.-Ldr. W. A. K. Dalzell, Flight/Lieut. T. C. Traill, D.F.C., F./O. Ellison.
Front row : Messrs. Earnshaw, Hayns, Warton, Shenstone, Parrish, Tripp, Seligman, Carmichael and Fairbairn. (FLIGHT Photo.)

CAMBRIDGE University Air Squadron is now undergoing its annual attachment at Old Sarum Aerodrome. This period of training lasts for six weeks, and is divided into three courses of a fortnight each. The membership of the squadron being 75, each course consists of 25 members. The term membership does not include the instructors. A member of the squadron is an undergraduate or Bachelor of Arts, who is still *in statu pupillari*. When

representatives of FLIGHT were invited to pay a visit to the squadron at Old Sarum on Tuesday, July 1, the second course of the year had just commenced. It was a great pleasure to be entertained once again by the hospitable Chief Instructor, Wing Commander Vernon S. Brown, M.A. (Cantab), and Flight-Lieuts. T. H. French, D.F.C., and T. C. Traill, D.F.C. We were sorry to learn that Flight-Lieut. French is soon to leave the Duxford Station Flight,



A flight of the C.U.A.S. in Bristol Fighters over the ruins of Old Sarum. The formation leader is an instructor and the other pilots are members. (FLIGHT Photo.)

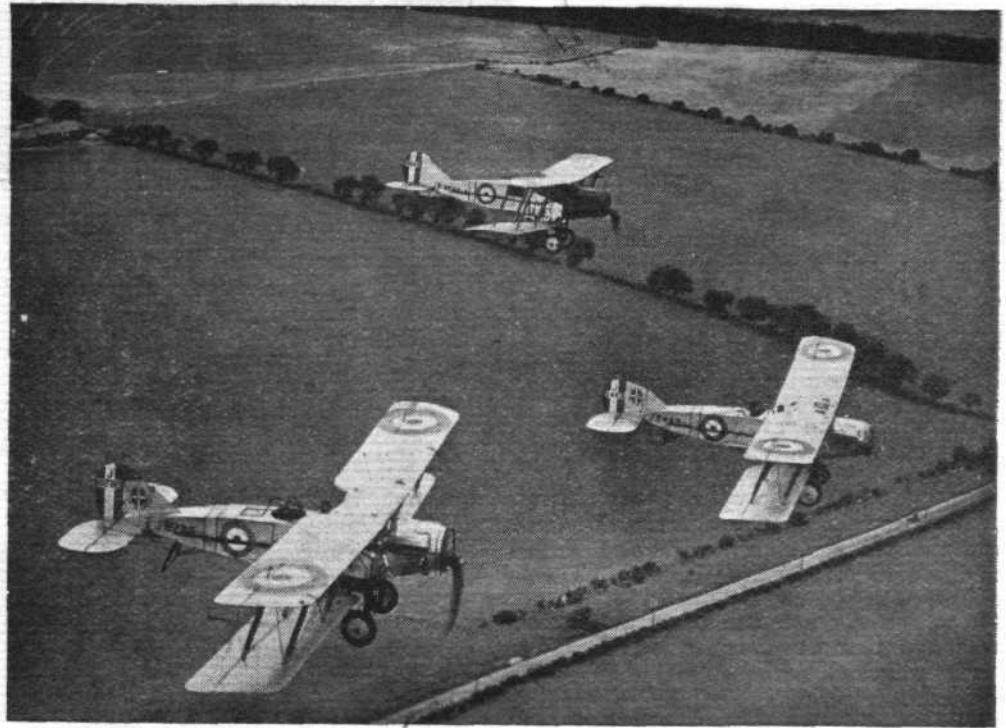
which, under his command, has done so much to help the Cambridge University Air Squadron to reach its remarkably high state of efficiency.

The first course of the present attachment put in 419 hours 15 minutes flying during its fortnight at Old Sarum, which is nearly 16 hours better than the first course last year. Last year nine commissions in the Royal Air Force were granted to members of the Cambridge Squadron, and this year the number is 10. Since the squadron was first founded, it has sent close on 100 officers into the R.A.F. In addition, about 37 members of the squadron are in the Royal Air Force Reserve of Officers, of whom 26 are qualified pilots. One member is an officer of No. 600 Bomber Squadron of the Auxiliary Air Force, though he did not leave Old Sarum to take part in the formation flying by that squadron at the Hendon Display.

Competition for places in the squadron is as keen as ever. This year there were about 30 vacancies, and something like 90 applications for admission. Consequently only the very pick of the undergraduates have any chance of becoming members. Preference is naturally given to men who intend to enter a profession connected with flying. In addition to the nine who were given regular commissions last year, six joined aircraft firms, one going to Fairey's, three to Vickers', and two to De Havilland's, while one joined the Royal Aircraft Establishment at Farnborough, and another is going there this year.

It is typical of the keenness of the squadron that although the first course starts at Old Sarum before the end of the summer term, there are always volunteers to join this course. Few experiences in life are more delightful than a summer term at one of the two old residential Universities, and the enjoyment reaches its culminating point in May Week at Cambridge and Eights Week at Oxford. Yet these members of the Cambridge Air Squadron will sacrifice even May Week.

For purposes of instruction, each course is divided into



A Formation of Bristol Fighters. Note the Cambridge arms on the fins. (FLIGHT Photo.)

two flights. While one flight is engaged in active flying, the other does some ground work, such as stripping machine guns. There are also lectures, though they are mostly reserved for wet days. The attitude of an undergraduate towards lectures is proverbially equivocal. Work is varied by visits to other air force stations. Most members of the squadron went to Hendon to see the Display. There have also been visits to Upavon, Larkhill and Gosport. That the Squadron makes progress year by year is shown to some extent by our photographs. Last year we published pictures of flying in Lynx-Avros. This year we were shown a formation of Bristol Fighters. The leader was flown by an instructor, but the two other machines were piloted by members. The formation which they kept was very good indeed.

F. A. DE V. R.

CROYDON NOTES

THE most present thing in our minds during the past week has been the passing of Jock Anderson—brave, truculent, soft-hearted Jock. There are those here who knew him back in his R.F.C. days of 1914, but down to the latest newcomers he was beloved by all. Parachutist, wing-walker, organiser of joy-riding shows, he was in at everything and was, moreover, a first-class engineer and a courageous pilot. It was characteristic of the man that few, if any, of his colleagues knew that in the early days of the war he was presented at Edinburgh Castle with the Royal Humane Society's medal for saving the lives of two boys who were drowning at Portobello. Our highest praise is that he was always loyal to those with whom he worked.

On Thursday, July 3, Croydon Air Port was visited by Their Imperial Highnesses the Prince and Princess Takamatsu of Japan. They were received in the flower-filled entrance hall by Lord Thomson, Air Vice-Marshal Sir Sefton Brancker, Mr. Montague, the Under-Secretary of State for Air, and by other important people. After being shown round the main buildings and hangars, they examined several different kinds of aeroplanes. The control tower and its working was explained to them, and they had an opportunity of hearing Mr. Youell, over Lympne, inward bound from Paris, asking by wireless telephony for his position and weather reports. It is thought that Mr. Youell was quite unaware of his distinguished listeners. Before lunch, the Royal visitors also examined and approved of the new Desoutter Mark II, which was standing by. The aerodrome lighting system was demonstrated, and a display of parachute message dropping given by F./O. S. A. Thorn, of A.D.C. Aircraft, Ltd.

The most important private charter job of the week also took place on Thursday, when the Earl of Ava and his bride were taken to Paris in the Imperial Airways D.H.50 by Capt. G. P. Olley. Amongst the wedding guests who saw them away was Woolf Barnato, of Bentley fame. Leaving Croydon at 5.30 they reached Paris in 2 hr. 20 min.

Lord Strickland, the Prime Minister of Malta, passed through on Wednesday, July 2, returning to Malta via Paris and Marseilles. As has been mentioned previously in these notes, he is thoroughly convinced of the practical value of air travel.

We are glad to welcome Bernard Wilson back after the longest of his travels for the *Daily Mail*. This time his Hermes-Desoutter had taken him out to Baghdad, where he had enjoyed several "Arabian Nights." On his way back he was bunkered in the dark at Aleppo by a small heap of stones which did things to his tail skid and rudder. Apart from that he reported perfect running of both engine and machine.

Two more of our habitués, Mackintosh and Jenkins, have returned this week after long travels. During the past month they have been "taking the waters" at Carlsbad and Marienbad, with extensions to Prague, Vienna, Berlin, Cologne and Paris. Their passengers were that great financial genius, Sir Herbert Holt, and his son, the owner of the Fokker in which their trip was made. The trip appears to have been uneventful from an aerial point of view—which is as it should be.

1,736 passengers and 68½ tons of freight have passed through the air port this week.

"M. L."

PRIVATE FLYING AND CLUB NEWS

HANWORTH ON KING'S CUP DAY

DURING the afternoon preceding the arrival home again of the King's Cup competitors, N.F.S. had arranged a display of flying on the usual lines.

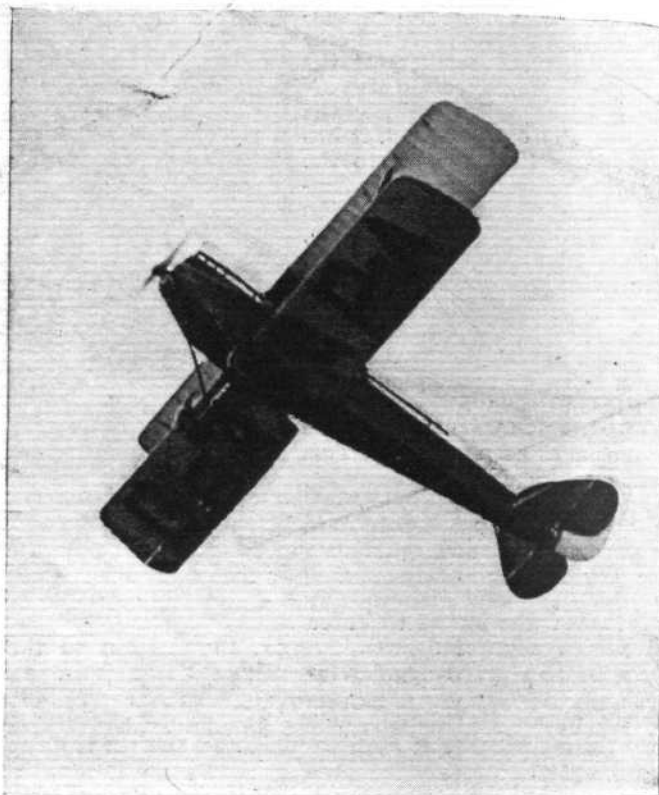
At 3 p.m., the show opened with a fly past of various types of aircraft such as the Spartan, Desoutter, Klemm, Moth, and Puss-Moth, which took off and made a couple of circuits of the aerodrome before landing. The next event became quite novel, because although it was a demonstration of the Autogiro and started in the usual manner, it finished with an exhibition of crazy flying. Flt-Lt. Rawson threw the machine about in a manner which we have never seen before; he did very steep turns, flat turns and even side-slipped, and showed that in the matter of controllability the new model is little, if anything, behind a normal type of aircraft. He was flying the latest type with the enlarged rotor, and was therefore able to take off with a very short run after revving up the rotor, and to land with no run at all.

Capt. René Fonck, who had been invited over for this display by N.F.S., then took up a Moth and did a well-timed approach and landing with his engine cut out.

Flt-Lt. Schofield aerobatted on a Desoutter and later on a Moth. His display is invariably so polished and all his manoeuvres so delicately carried out that there is really little new one can say about it. There are two distinct types of aerobatic pilots: the first is absolute master of the machine in any position, while the second is a sort of rhythmic artist, and Flt-Lt. Schofield is undoubtedly of the second type and more artistic in his flying than most people we see.

A balloon-bursting competition was held, and several private pilots took up machines and chased the elusive bladders. No result was announced; in fact, no names of the competitors were announced at all during the competition, and as Mr. E. C. Brown on his gold and blue Moth burst all his balloons we can only assume that he will be given the prize at a later date.

M. Bossoutrot, who used to be test pilot for Farmans, then introduced a new note to such meetings by taking up his

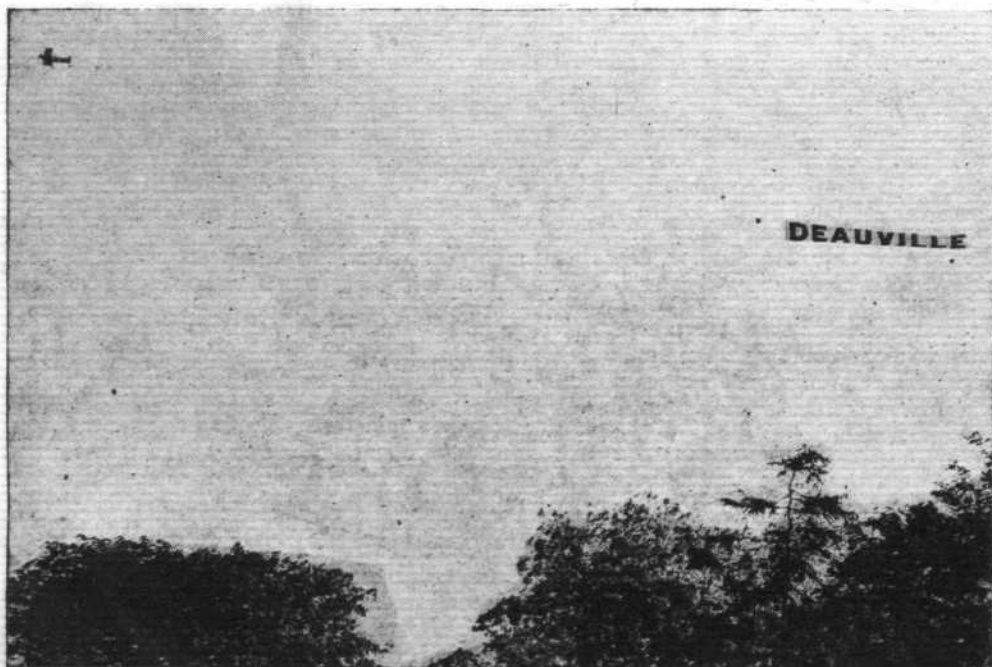


Flt-Lt. Schofield aerobating. His manoeuvres had more of the daintiness and grace of a butterfly than of the somewhat crashing flight of a moth. (FLIGHT Photo.)

Bleriot Spad ("Jupiter") and giving a demonstration of the Bleriot method of advertising by banner flying. This is roughly the same idea as the R.A.F. have used for towing aerial targets, and the banner, which measures 120 ft. by 20 ft., is towed at the end of a long cable. The banner is stowed under the machine bound up with brown paper, and a rip-cord is used to release it when desired. In this case the banner had DEAUVILLE written on it, and it was very plain as the Spad flew round at about 3,000 ft. When the demonstration is finished the banner and towing cable is dropped over the aerodrome before the aircraft lands. It is understood that N.F.S. are prepared to operate this form of advertising in this country under licence.

Flt-Lt. Styran showed us how not to fly when near the ground by doing flat turns inside the aerodrome, and then, finally, Mr. John Trantum made a beautifully-timed parachute landing from about 1,200 ft. As usual, he judged his distance perfectly, and by judicious "spilling" landed right in front of the club enclosure.

During the day a certain amount of joy-riding was carried on in Desoutters, and the public certainly appear to appreciate the comfort of the cabin machine. We understand that N.F.S. are finding a very steady demand for joy-rides in such machines all over the country. While on the subject of joy-riding it is regrettable to hear that lately



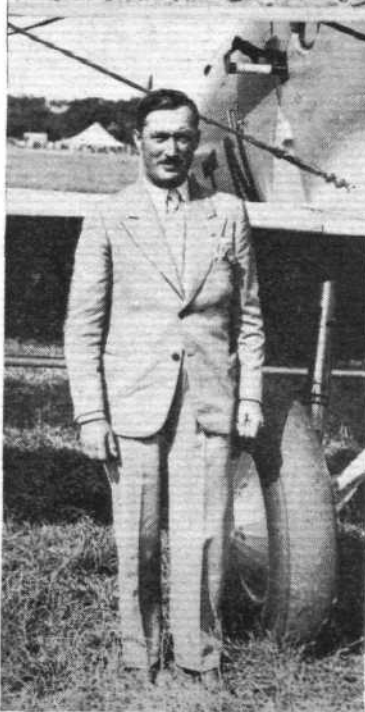
The Bleriot-Spad advertising the joys of its native country over Hanworth. (FLIGHT Photo.)

a certain amount of underhand cut-throat business has been attempted. The tone of the relationship of various people in the business has always to date been far above that in other trades, and it seems a pity that it should be marred at this stage of proceedings. However, when a newcomer leases a field alongside that of an established concern, during the temporary absence of the owner, and proceeds to advertise from the old owner's own aerodrome and to set-up for joy-riding there, it does seem as if the business would be better without that newcomer, for he can but cause bitter feeling in the industry, and after all, there are still many parts of the country where he would be conflicting with no one and at the same time have plenty of scope to make a living.

A large crowd had been anticipated, and the cheap enclosures appeared to be well patronised with some five or six thousand spectators. The club enclosure was, of course, packed, as was the clubhouse, especially during the day when we were all waiting for the machines to get back. The crowd in the clubhouse was evidently larger than had been expected as the staff were quite unable to cope with their demands for food and drink, and even the marquees which caterers had erected in the grounds were run dry long before the day was finished.

N.F.S. announce that the meeting which had been arranged for next Sunday, July 13, at Hull, has been postponed until August. The actual date will be announced later. The meeting at Sherburn-in-Elmet will, however, take place next Sunday, and an interesting programme has been got out which includes several novel features, among which are a race between the Auto-giro and three dirt-track riders, an open aerobatic competition and a race solely for private owners. On July 19, Mrs. Baldwin has organised an aerial meet and rally to be held at Hanworth Park. This meeting is to help the National Birthday Trust Fund (for the extension of Maternity Services), including Mrs. Baldwin's appeal for anaesthetics. The programme begins at 3 p.m., and six cups with a large amount in cash, are being given for the rally and a race.

THE HAMPSHIRE AEROPLANE CLUB.—Flying time for the month ended June 30, 1930, was 233 hr. 10 min., made up of dual instruction, 71 hr. 40 min.; solo flying, 22 hr. 25 min.; "A" pilots solo flights, 127 hr. 45 min.; and instructors, solo and passengers, 11 hr. 20 min. Club aircraft have put in 1,280 hr. for the half year, which is over 500 hr. more than during the corresponding period in 1929.



(Above) M. René Fonck and below him M. Bossoutrot at Hanworth. (FLIGHT Photos.)

The Junkers Junior as a seaplane.



Twelve new members joined during June. Lieut.-Comdrs. Stephens and Garside made successful first solo flights and Lieuts. Tangye, Barwood and Moran passed the tests for their "A" licences.

Lieut. B. E. M. Goldman, R.N., won the landing competition which was held on the 22nd.

BROOKLANDS AERO CLUB.—The Brooklands authorities announce that the month-old Brooklands Aero Club already has an active membership of over 70 strong.

THE PHILLIPS AND POWIS SCHOOL at Reading have put in 211 hr. of instructional flying during June. Five Moths have been in commission, and eleven pupils have passed their tests for "A" licences.

THE BRISTOL AND WESSEX AEROPLANE CLUB has been asked to arrange an air display for the members of the British Association for the Advancement of Science at the Bristol Airport, on September 6, and the club proposes making this occasion the date of their annual air garden party.

BROOKLANDS SCHOOL OF FLYING.—The total flying time for the month of June amounted to 150 hr. During the month the school's joy-riding machines have attended several air meetings, of which the most important was that held in connection with the opening of the new municipal aerodrome at Ipswich, on June 26. A few passengers were taken up in the D.H.50, and an Avro, by Capt. Davis and Mr. Lowdell, but even after making due allowance for counter attractions in Ipswich, Suffolk appears to be the very reverse of air-minded judging by results. Mr. Murray of the school also attended with his Moth and gave his usual excellent display of aerobatics.

The Hon. Mrs. Victor Bruce has come to the school for a course in advanced navigation, and Miss Muntz for a course in ground engineering; both are already pilots.

The school Moths have been kept busy with the influx of new pupils, and the "Bluebird" has also been in great demand.

ALTHOUGH flying is now an everyday means of transport, there are still many people who do not realise the ease with which trips to, say, the Continent may be taken, and in their imagination they think that such a trip as to Ostend must be accompanied with the same trouble as is inevitable when one goes by train. We give here a short description of a trip recently taken by Col. the Master of

Sempill in his "Bluebird," which serves to show that little or no preparation is necessary and the formalities entailed when passing through the Customs are not really very extensive.

"On Sunday, June 29, I thought it would be interesting to fly over to Ostend to attend the Air Rally that had been organised for that and the previous day. The Customs Officer had very kindly appeared at Heston before his usual time, which enabled one to make an early start. As is often the case, however, 'the more haste the less speed,' for I had not been in the air more than ten minutes when I noticed a trail of mist floating out behind the machine, and discovered that the cap of the petrol tank had come off. This necessitated a landing at Croydon to obtain another cap and some more petrol, which, of course, meant a certain delay. In due course everything was in order, and in a little over an hour and a half Ostend had been reached.

The aerodrome there is of a fair size, but rather rough in surface. This slight defect, however, was easily made up for by the extraordinary kindness and helpfulness of the entire staff, who could not do enough for the visitors.

A number of machines had already turned up, including a Breda from Heston, and various others from France and different parts of Belgium. The new Farman cabin monoplane looked particularly attractive. On the ground there were also two Handley-Page machines looking very spick and span in spite of their many years of service in the S.A.B.E.N.A.

The Bluebird aroused a great deal of interest, primarily because it was the only side-by-side two-seater machine there, and there is no doubt that this particular feature does appeal to people quite considerably.

Having to return to Folkestone to see Herr Kronfeld, who was giving some soaring flight demonstrations, I left Ostend at 3 o'clock, bringing back as passenger Miss Lippens, the daughter of the Belgian Air Minister, and one of the only two—or three, at the most—ladies in the world who have qualified for their 'C' certificate for soaring flight.

The visibility was exceptionally good, it being possible to see at least 50 miles inland, and to pick out in Belgium and Northern France the various points that were so well known in the war. Therein came the advantage of side-by-side seating, as my passenger, with a map, was able to point out a great number of places of interest with which I was not familiar.

On the way across the Channel we passed a S.A.B.E.N.A. Fokker, evidently bound for Brussels.

A landing was made at Lympne to complete the necessary customs formalities, and then, after a refreshing cup of tea with Commander Deacon, the officer in charge, we went on and landed in a small hay field just at the back of Folkestone, and immediately behind the starting point for Herr Kronfeld's soaring flights.

The only other incident of the day, apart from a very pleasant flight in the evening back to Heston, was the fact that one of the many spectators on the landing field took a particular fancy to my watch."

Col. Sempill's little trip serves not only to show the companionability of the side-by-side seating arrangement of the Bluebird, but also that continental trips such as this offer very little in the way of formalities which



The new Desoutter II. Our view shows the large doors on each side. (FLIGHT Photo.)

should deter the average private owner even if he (or she) has had quite limited experience of aerial touring.

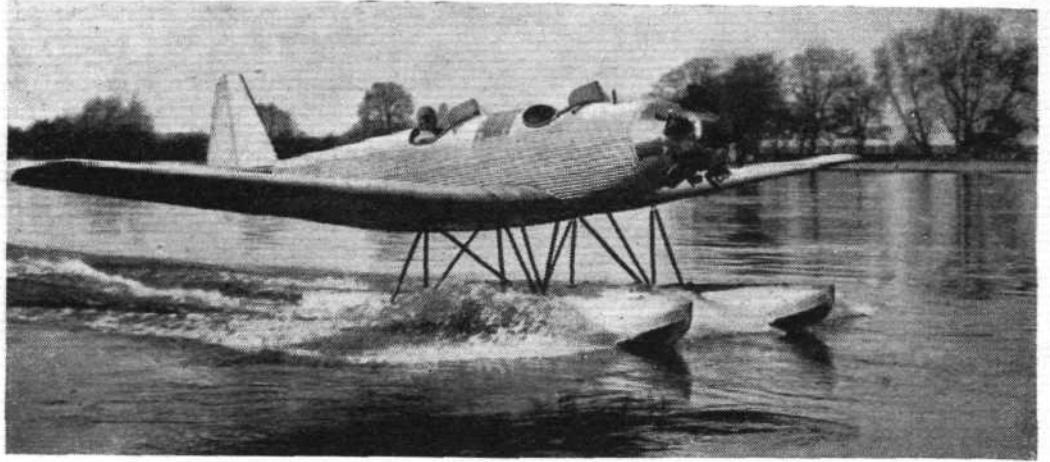
A GRAND OLD-TIMER.—Mr. Griffith Brewer is now aged 63, yet he has just taken his "A" ticket again and laughs at those who suggested that he was too old to fly. It is true that at Hanworth, where he has been doing his flying, he was not allowed to go solo until he had done a very considerable time dual but he has stuck it through and is undoubtedly a glorious example to those who still hold back on the score of years. Of course, Mr. Brewer is not without knowledge of flying, for not only was he in all probability the first Englishman to fly, having been in the air with Wilbur Wright on October 8, 1908, but he also learnt to fly himself in 1914. He was also well known as a pioneer balloonist and has acted as patent agent and adviser to well-known aeronautical people.

He now contends, and we believe rightly so, that the danger curve of the car, which has risen so persistently has now crossed the curve of the aircraft, which is falling, so that as an old man he feels safer in the air than in a car. The number of men of mature years who are learning to fly is steadily increasing and we hope that the example set them by Mr. Brewer, to whom we offer our heartiest congratulations, will spur on many more to do likewise.



The Martlet ("Genet"). This is the only aircraft built primarily for private owners who want to stunt. It originates from the Southern Aircraft factory at Shoreham. (FLIGHT Photo.)

Another view of a Junkers Junior all-metal seaplane.



THE NORWICH AND NORFOLK AERO CLUB are holding their annual display on Saturday, July 26. Flying will commence at 10.30 a.m., and there is a Rally Competition for which the zero hour will be 12.30. A cup is being presented as first prize and there will also be second and third prizes. On Saturday evening there will be a Grand Pageant Dance at the aerodrome, and on Sunday, July 27, a Garden Party.

THE AUCKLAND AERO CLUB held their Pageant on April 12 last. News has just come to hand concerning the result of the competitions. There were two landing competitions, the New Zealand Aerial Derby, and the New Zealand "Herald" inter-club Challenge Trophy Race. The first and second prizes in all competitions and races were won by Moths ("Gipsy"). There were 21 entrants and the machines comprised seven different types.



Capt. Percival sitting in the opened cockpit of his Hendy 302, which he flew in the King's Cup Race. He made exceptionally good time to Manchester. This machine offers a new version of comfort to private owners, and appears to combine a low landing speed with a high top speed and, moreover, has excellent visibility from the pilot's seat. (Flight Photo.)

ETHYL FOR CIVILIAN AIRCRAFT

A MOST interesting demonstration of ethyl spirit was given at Croydon on Thursday, June 26. Organised by Mr. F. G. Hewlett, the aerodrome representative of the Anglo-American Oil Co., Ltd., it was attended by Major Richards and Capt. Lawford, of the Air Ministry, and the technical staffs and pilots of all the firms operating from the aerodrome, including Imperial Airways, Air Union, Walcot Air Lines, Surrey Flying Services, and A.D.C. Aircraft, Ltd.

The demonstrator was Mr. Stanley Vaughan, one of Pratt's technicians, and he had some remarkable things to show. His apparatus consisted of a single cylinder, 1 h.p., water-cooled unit with overhead valves. A device known as the Midgley bounding pin is mounted in the cylinder head, and its function is to indicate vibration in the engine. During smooth running there is no movement of the pin, but on the least tendency to pink, the pin bounces up and down. Its movement, however, is so small as to be barely visible to the eye, but an electrical connection recording in lamps obviates this.

The engine was started on straight A.1 spirit, and showed a high output of power on the meter. There was no sign of knocking shown on the registering lamps and the engine ran smoothly. On changing to a medium grade spirit a knock became audible and visible on the register, whilst there was a drop in power. A further change was made to a poor grade spirit, and the symptoms of pinking combined with loss of efficiency were much exaggerated. At this point Mr. Vaughan introduced a few drops of ethyl into the low-grade fuel, and in an instant the knocking stopped and the power rose higher than before. The whole demonstration was most convincing, and the spectators were much impressed by it.

With the continual increase in compression ratios, new developments in fuel become necessary. Detonation was admitted to be a fuel fault, and by tackling the problem actively the Anglo-American Oil Co., Ltd., have done much to advance the light-weight high-powered internal-combustion engine.

GLIDING

THE BRITISH GLIDING ASSOCIATION.—The B.G.A. is proposing to arrange a party to visit the Rhön Competition, August 9 to 24, when the chief sporting events of the year are flown at the Wasserkuppe. This will give an opportunity of seeing the latest types of sailplanes flown by the pilots of the various German gliding clubs, in the various inter-club competitions.

The inclusive cost of the tour will not exceed £16, and if there is a really good response cheap facilities will be available which will reduce the cost very considerably.

Members of the Association and affiliated clubs who wish to take this tour should apply immediately, in order that the size of the party can be known and the exact cost worked out.

It is hoped that at least two or three members of each gliding club will be able to take this opportunity of seeing motorless flight at this international competition.

THE LONDON GLIDING CLUB.—The club has made steady progress through the month, and its greatest achievement is in having secured the first four "C" licensed glider pilots' certificates in the country. These were taken by Capt. Latimer Needham, Mr. Marcus Manton, Mr. Buxton and Colonel the Master of Sempill, in the order named. All these gentlemen qualified on the club's "Prüfling." This machine was sent to the Itford Hill Demonstrations organised by the B.G.A., and whilst there, was flown by Herr Kronfeld, who impressed all present by his demonstrations of its controllability.

The instruction of members without previous aviation experience has been continued throughout the month on the two club training machines, and about 350 instructional flights have been made. This section has been carried on by Capt. Needham, Mr. Marcus Manton and Mr. Buxton, and thanks to their untiring energy, several *ab initio* pupils are nearing the "A" certificate stage.

During his visit to this country, Herr Kronfeld has found time to visit the club's gliding ground at Ivinghoe, and has reported that he considers it to be an excellent site for both instructional and soaring flights.

The first private owner member of the club is Capt. Needham, whose machine, the *Albatross*, was built to his own design by the R.F.D. Co., of Guildford, and has already made a number of satisfactory test flights. Herr Kronfeld has expressed it as his opinion that it should be a most satisfactory low-wind sailplane.

The club has just ordered a two-seater sailplane from Germany, and it is hoped to have this machine in commission

in a very short time. It is hoped that this will be of considerable assistance to *ab initio* members, who will no longer have to be sent solo on their first trip.

On Monday last, Herr Kronfeld gave a most interesting lantern lecture to the club in the Royal Aeronautical Society Library, and it is hoped to arrange a number of similar lectures in the near future.

The number of members continues to increase satisfactorily, but there are still a few vacancies, and particulars may be had from the Secretary, The London Gliding Club, 44A, Dover Street, London, W.1.

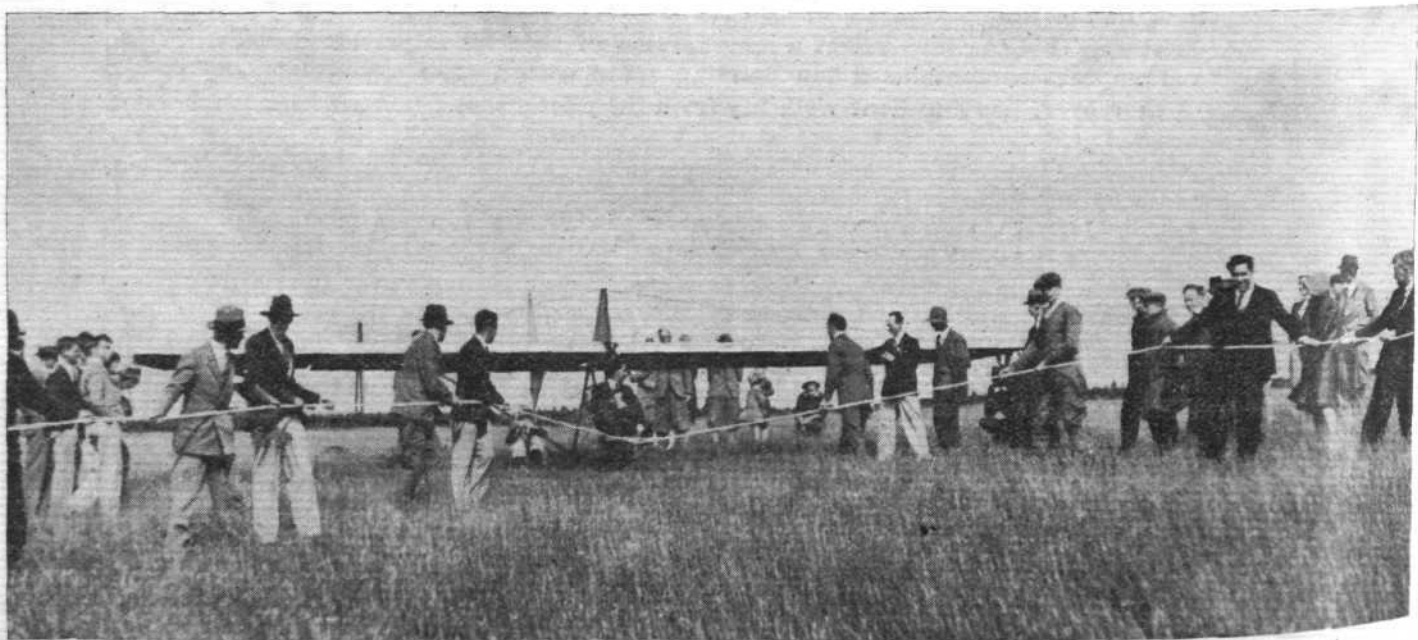
A "Prüfling" match, the first of its kind to be held in this country, is to be held at Ivinghoe on Sunday, July 27, against the Lancashire Aero Club, teams will consist of six a side, and the team with the best aggregate total (no individual member to count more than half-an-hour!) will be adjudged the winner. According to the Manchester local Press, the Lancashire Club will be heavily handicapped, owing to its heavy average weight, and rumour has it that a prominent member of the B.A.I.G. may be seen sprinting round Lloyd's new building every lunch-time, but we note that hot-pot suppers have not been discontinued at Woodford.

THE SAILPLANE CLUB OF T.M.A.C.—In three weeks the club will take delivery of its first glider (R.F.D. Zögling type). The gliding ground at Smalldole, Sussex, is within easy motor-bus distance from Brighton, and is admirable for both gliding and sailplaning. Covering about 500 acres, the hill formation, rising approximately 750 ft. above sea-level, is horseshoe shaped with the open end towards the prevailing (S.W.) wind, thus affording a natural wind-trap with admirable rising currents.

Car-park space is ample and ideal camping facilities are available for club members, even to the detail of a main-water supply.

Applicants seeking election or further information should write to the Organising Secretary, The Sailplane Club of T.M.A.C., 404, King's Road, Chelsea, S.W.

THE MIDDLESEX GLIDING CLUB.—Mr. D. Ussher is hoping to form a gliding club for Middlesex, to be run so that expenses are covered but no profit is made. He has many applications for membership, and those who are interested should apply to him at 36, Framfield Road, Highbury, N.5. The chief idea will be to provide gliding facilities as near London as possible, so those who wish to do so many indulge in that sport in the evenings.



The Scarborough Gliding Club recently had their first glider out, and above Mr. Slingsby is making one of the first flights on Whitby Moors.

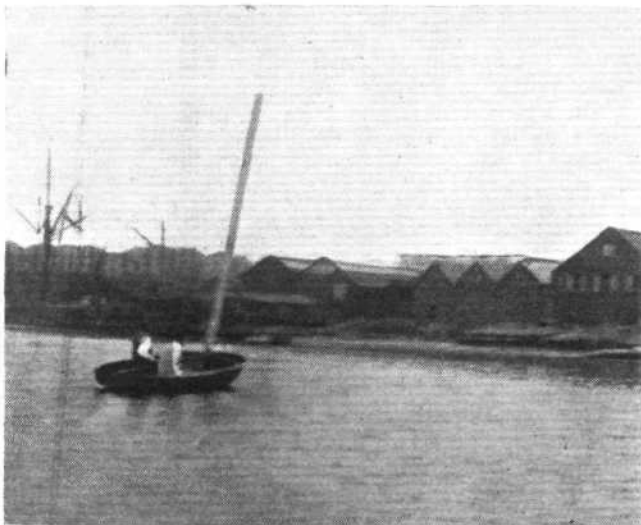
SAILING by means of an aircraft wing is not a new departure, as this was tried out by Chevalier Willy Coppens some years ago. In this case, however, he tried it out on a sand yacht with, we believe, considerable success. Capt. Boothby states that the chief difficulty so far is that the wing he is using is twice the weight and half the area of the normal "Uffa" rig, but the new wing, which will be arranged so that it may be reefed, will be better in this respect and we anticipate that much interest will be aroused in his "Aero" rig as he calls it.

THE LONDON GLIDING CLUB announce that they will be holding a "Gliding Camp" at Ivinghoe from July 27 to August 3. Camping accommodation will be provided by the club and there will be four machines available for gliding and instruction every day. The inclusive charge for members will be £2 10s., while, if accommodation is available, a certain number of non-members will be permitted to come for £4 4s. Those interested should apply to the Camp Sec., G. Grice, "Myosotis," Luton Road, Dunstable.

HARROGATE AIRCRAFT CLUB, in association with its sister club at Ilkley, hope to secure the services of Herr Kronfeld to give flights in his "Wien" from Beamsley Beacon, near Ilkley.



"PLANE-SAILING": Capt. F. L. M. Boothby has recently fitted a Spartan wing to his "Uffa Fox" racing dinghy, and although the wing is, of course, somewhat heavy for the job, he has obtained very good results.



CLOSE HAULED: This type of rig should allow sailing very much closer to the wind than any other, and a new wing which is in hand and which may be reefed is expected to be a great success.

THE NOTTINGHAM GLIDING CLUB has decided to recommend that the subscriptions for pilot members and associate members shall be reduced to two guineas and 10s. 6d. respectively.

When the club was first formed the purchase of a machine was, of course, the primary consideration, but now that an R.F.D. glider is in commission, it has been found possible to provide the sport at cheaper rates.

Mr. L. Burbidge who has been appointed honorary secretary of the club, will be glad to give any particulars if those interested will communicate with him at the Welbeck Hotel, Nottingham.

THE DERBY AND DISTRICT AERO CLUB are shortly to forsake their present gliding ground at Turnditch for a site on the road between Wirksworth and Brassington.

Crown Prince of Japan at Croydon

PRINCE AND PRINCESS TAKAMATSU OF JAPAN paid a visit to Croydon airport on July 3, when they spent about four hours watching the air liners arrive and depart, inspecting the aerodrome buildings and aircraft, etc. They were received by Lord Thomson and Sir Sefton Brancker, while Maj. L. F. Richards, Chief Aerodrome Officer, acted as guide.

Our Well-informed Contemporaries

The following paragraph appeared in *Truth* on June 25:—

"Last week rehearsals took place for the Royal Air Force display, which opens at Hendon on Monday next. The special feature of these rehearsals was some 'thrilling' new aerobatics, in which whole squadrons of nine machines, tied wing to wing, did breathless and hair-curling evolutions. The Air Ministry has appreciably curtailed the casualty list of the R.A.F. since it so stringently prohibited 'stunting' in any shape or form during the course of training. Its approval of thrilling new aerobatics for the Hendon display rather suggests it is wavering in this policy. I quite realise the temptation to 'go one better' than ever before; the idea being that if you are going to give a show let it be the greatest possible show—something to make even the Aldershot Tattoo look quite tame in comparison.

"The odds are that these new aerobatics will be carried out with faultless precision and without mishap. But it is idle to deny that their appeal lies in their riskiness. No doubt there are plenty of daring young airmen who delight in these perilous exhibitions; no doubt there are also plenty of the public for whom such spectacles have an irresistible

fascination. Whether it is desirable for a Service Department to cater for such people is another matter."

We should be much obliged if our contemporary would quote in detail, or give the reference number of, the Air Ministry's order which stringently prohibited stunting in any shape or form during the course of training. We should also like to enquire what chance of victory or of survival *Truth* thinks that a fighter pilot would have in air combat if his training had not made him a past master of the art of stunting.

Circuit of Italy

THE organisation for the 2,175 miles international air race round Italy—"Giro Aereo d'Italia, 1930"—has now been completed, and among the first names entered is that of Miss Spooner, who is flying a de Havilland "Moth."

Air Transport in French Africa

THE sixth North African Conference, which concluded its sittings on July 6 at Algiers, recommended the development of the trans-Saharan aerial routes already selected by the French Air and Colonial Ministries, and urged that special attention should be given to the aerial survey of desert automobile roads and the organisation of wireless and meteorological stations in concert with neighbouring Governments. It also recommended the making of practical experiments to determine a system of day beacons on aerial routes, and the drawing up of a simple aerial map showing landing grounds, wireless and meteorological stations, parking places, water points, and important natural features. The keynote of the conference was the need of uniting the French African possessions by means of automobile and aerial transport as the precursor of the trans-Saharan railway.

AIRISMS FROM THE FOUR WINDS

Australian Flyers Feared Lost

It is feared that Mr. E. L. Hook and Mr. J. Matthews, who were attempting a flight from England to Australia in a D.H. "Moth," have been lost in Burma. They left Akyab on July 3 for Rangoon, and have not been heard of since. One report states that they were seen that morning over Kyaukpyu Is., about 60 miles from Akyab, while an official report from the Deputy Commissioner at Sandoway states that the airmen were seen flying low and apparently in difficulties about 10 miles north of Taungup, and heading for an impenetrable jungle infested by tigers and leopards, behind which is the very high peak of Arakan Yomas. The Government of Burma has given instructions for a diligent search to be made, although the chance of finding the airmen alive is very small.

Kingsford-Smith Encircles the World

Sqdn.-Ldr. Kingsford-Smith has now accomplished a journey around the world by air with his arrival, on July 4, at Oakland Airport—whence he had originally set out on his Transpacific flight in 1928. He and his companions, Van Dyk, P. Saul and J. W. Stannage, left Roosevelt Field, New York, in the Fokker monoplane *Southern Cross* on July 2, and landed that evening at Chicago. The next day they proceeded to Salt Lake City, and concluded the journey the following day. On arriving at Oakland, with an escort of aeroplanes, they were given a tumultuous welcome, and after addressing the crowd on the motor parade, Kingsford-Smith was presented by the citizens of Oakland with a handsome silver service, embossed and bearing a suitable inscription. In recognition of his Transatlantic flight, Sqdn.-Ldr. Kingsford-Smith has been promoted honorary Wing-Commander in the Royal Australian Air Force.

Miss Amy Johnson

On July 6, on the eve of her departure home from Fremantle in the P. and O. s.s. *Naldera*, Miss Amy Johnson was entertained at luncheon by the Governor of Western Australia, and Lady Campion.

The Schneider Trophy

THE Federation Aeronautique Internationale has agreed to the suggestion of Italy that the final date for entries for the Schneider contest should be postponed from July 31 to December 31. The Italians also protested against the new rule that the entrance deposit should be 200,000 francs. They suggested that the next contest should be held in Italian waters. The Royal Aero Club of the United Kingdom protested against the Italian proposals. Finally, the F.A.I. resolved that entries made before July 31 shall pay only 5,000 francs, while entries made between July 31 and December 31 shall pay 200,000 francs. Italy has since formally notified the Royal Aero Club of an entry of three machines.

Solo Atlantic Flight Fails

Sqdn.-Ldr. WYNNE-EYTON, who was to attempt a solo flight across the Atlantic in a D.H. "Puss Moth," met with disaster when starting from Lister's Field, St. Johns (N.F.), on July 6, for Harbour Grace. The machine had just taken off when it nose dived to the ground from about 30 ft. and burst into flames. The onlookers rushed to the wreckage, and managed to drag him from the flames. He was taken to hospital suffering from shock and injuries to the face.

The "Quest" Sails

WITH every available inch of space occupied for the necessary impedimenta—including two aeroplanes with floats and spares—the historic and good ship *Quest*, with the British Arctic Air-Route Expedition on board, sailed from the Thames on July 5. In addition to friends and relatives, Sir Sefton Brancker gave them bon voyage at St. Katharine's Dock.

Three Weeks in the Air

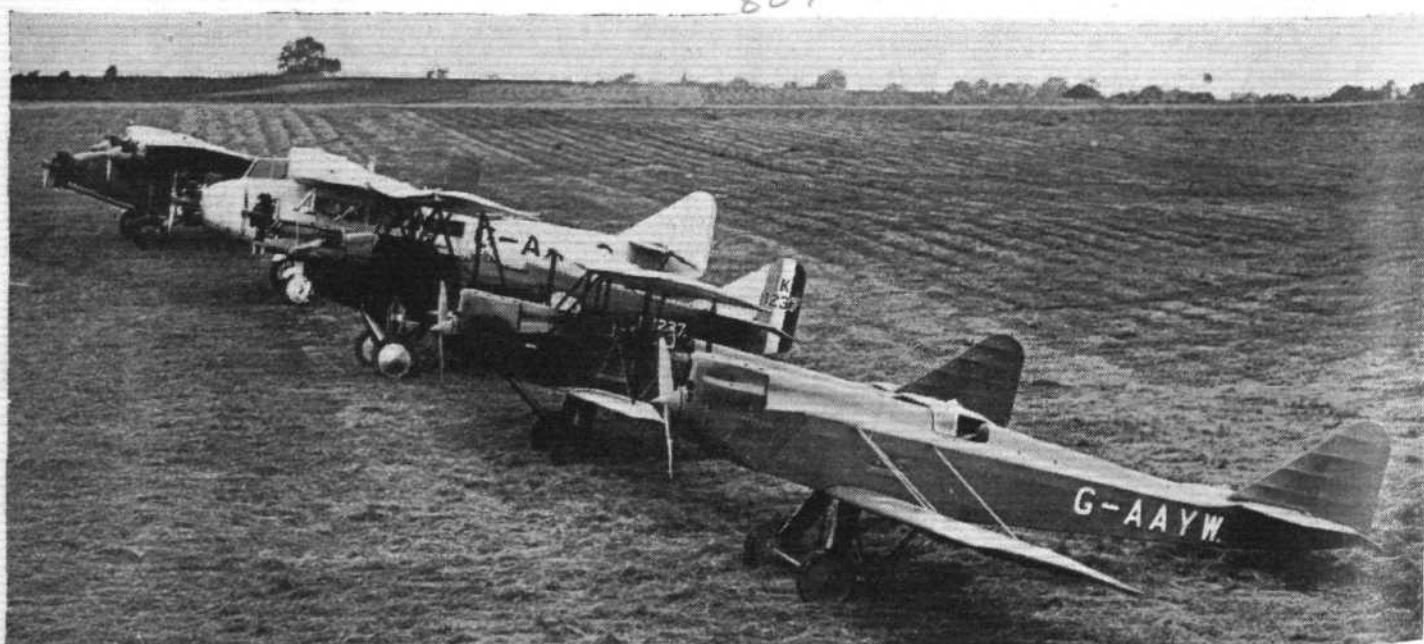
THE brothers John and Kenneth Hunter, who have been carrying out an endurance flight (with refuelling) in a Stimson-Detroit monoplane, *City of Chicago*, over that city, landed at 11.20 p.m. (G.M.T.) on July 4, having flown continuously for 23 days. The following official figures have been issued:—Time in the air, 553 hr. 41 min. 30 sec.; contacts, 223; petrol used, 7,630 gall.; oil used, 400 gall.; approximate mileage, 41,475.

Al Cheeseman's Escape

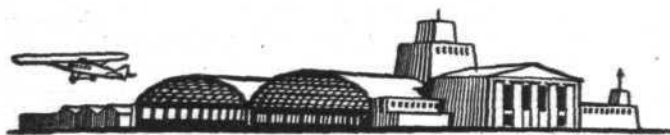
MR. AL CHEESEMAM, who accompanied Sir Hubert Wilkins on his Antarctic Expedition, was flying, on July 3, over the Ontario forest country when his aeroplane caught fire. He managed to "land" the machine on the surface of a lake and swim ashore to safety.

R.A.F. "Iris" in Iceland

Two "Iris" flying boats, each with three "Condor" engines, from No. 209 F.B. Squadron, started from Mount Batten for Reykjavik (as already reported in our columns), to take part in the recent millenary celebrations in Iceland. At Stornoway, Wing-Commander Sydney Smith developed appendicitis and had to go into hospital, while one of the boats found water in her petrol system and stayed behind. The remaining boat flew on under the command of Sqdn.-Ldr. J. H. O. Jones, and refuelled at the Faroes. The 425 miles from there to Reykjavik was covered in 6 hr. 35 min. The boat made various flights during her stay in Iceland. While there, Corpl. Faull had to undergo an operation for internal trouble on board H.M.S. *Rodney*. He is believed to be making good progress. The "Iris" left Iceland on July 2 and arrived at Plymouth on July 4. It is understood that she attracted much attention and admiration during her visit to Iceland.



MEMBERS OF THE AVRO FAMILY: Beginning with the machine in the foreground, the types lined up are: The "Avro Monoplane," the "Avro" biplane, the "Avro Trainer," the Avro Five and the Avro Six. (Flight Photo.)



AIR TRANSPORT

AIRSHIPS AS EMPIRE LINKS

IN view of the forthcoming flights of the British airships R 100 and R 101—the former to Canada and the latter to India—and the amount of discussion of late regarding the use of airships for Empire transport, we think the following article on "Airships as Empire Links," which was contributed by a correspondent to *The Times* for July 7 last, may be of special interest to our readers:—

The first Labour Government undertook, though it did not wholly conceive, the experiment of improving Imperial communications by means of airships. This has now reached a stage where review is possible. In spite of the dogmatic and contradictory utterances of prophets, whom events have already shown to be of the minor variety, no final judgment can be passed until protracted trials have been made and considered. If, in a world of constant technical progress, an absolute adverse judgment can never be justified, it is nevertheless possible that facts may suggest a call for a halt until established difficulties have been surmounted.

A scheme to improve Imperial communications implies, in the first instance, the creation of a more rapid passenger and mail service between this country and Canada, South Africa, India, Australia and New Zealand; while, at a later stage, direct intercommunication between these several parts of the Empire may become practicable. For the first and more important enterprise a machine is needed capable, for reaching Canada, of continuous flight over some 2,700 land miles; for the other Dominions the range may be shorter if supplemented by mooring masts equipped with gas-making plant.

Attempting to meet such demands the Air Ministry drew up an outline specification on which two airships, R 100 and R 101, have been designed and constructed in about six years. The first, built by a contractor, is ready to face her task; the second, built by the State, will be ready before long. In design (as to which there were no restrictions save that certain factors of safety had to be fulfilled to the satisfaction of an independent body, the Airworthiness of Airships Panel) the two vessels differ materially. In structure they represent two distinct types; in the material of their manufacture the designers have favoured different alloys; and, in the propelling machinery, engines using different fuels are employed. The privately built ship shows less departure than the other from what was established practice.

The Voyage to Canada

Since definite information is available of R 100, while R 101 is still about to be enlarged, the former ship better lends herself to detailed examination. How far does she meet the requirements of a unit in a possible Imperial Airship Fleet? The following figures, which appeared in *The Times* last November, give the still air range of the vessel, at different air speeds, when carrying a crew of 40, 100 passengers, and 26 tons of petrol (the maximum in the circumstances cited):—

5,000 air miles at	50 m.p.h.
3,800 " " "	60 " "
3,000 " " "	70 " "

Under still air conditions it is at once apparent, the range of the ship is adequate for any link in the Imperial chain. But, as flat calms are rare, a mere correlation of ship performance and geographical distance provides no basis of judgment. The daily wind direction and force over the area between termini must be the factor determining whether or not the craft can operate to a time-table.

While there must be some latitude of opinion on the relation of performance to average meteorological conditions, it will probably be generally accepted that R 100 is incapable of operating commercially between this country and Canada, though on many occasions during a year, by selecting her course and the time of her start, she could, and one hopes will, make this voyage with both speed and safety. Parenthetically it may be remarked that on R 34's now historic flight to America in 1919, the distance travelled through the

air exceeded that between the termini by well over 1,000 miles. Further evidence of the extraordinary difficulty of the North Atlantic is supplied by the series of aeroplane failures on the west-bound route.

Between England and Egypt (Ismailia), especially if a mooring mast is provided at Malta, an R 100 would appear capable of maintaining some approach to a commercial service. Of the journey from Egypt to India (Karachi), if an additional mooring mast is available at some intermediate point, perhaps Baghdad, the same tentative conclusion is permissible, though qualified by more hesitancy. Beyond India and south of Egypt we need not at present look. The conclusion then is that, so far as the carrying of a commercial load in accordance with a time-table is concerned, the two new airships, while capable of impressive demonstrations to the West, are likely to offer complete justification of their construction only by routine services towards the East. There they may compete with the faster commercial aeroplane by reason of their ability to fly at night and their greater comfort.

Comparisons

It is, of course, impossible to speak with precision of the cost of airships and of airship travel until the experimental stage has been passed, but a comparative estimate can be made. The cost of R 100 has been officially stated at £440,000; that is to say, £4,400 per unit of passenger accommodation, an impressive amount which, when compared with a 20,000-ton, 20-knot liner, considered merely as a first-class passenger-carrying machine, show the following proportion:—

Liner, cost per unit of first-class passenger accommodation—1;

Airship, cost per unit of passenger accommodation—5.

This disparity is no true indication of the respective sums on which the passenger must pay interest and depreciation, for the difference in speed of the two forms of craft must be taken into account. Since, on the Indian service, the airship will probably prove, after the initial difficulties are surmounted, two and a-half times as fast as the liner, she has the potentiality of earning two and a-half times the revenue in the same period (given equal working capacity), and consequently the better basis of comparison is the relative amount on which the passenger pays interest and depreciation (taken as six times as high in an airship as in a liner, admittedly a guess):—Liner, 1; airship, 2.3.

This difference, which must in some measure be reflected in the fares, will probably prove, after experience, to be subject to modification in favour of the airship.

The weight of R 100, unladen, being between 95 and 100 tons, the cost per ton (if the higher figure be taken) has been £4,400, an amount which none but the most pessimistic can think impossible of material reduction. One of the world's most luxurious motor-cars costs, on a weight basis, but one-quarter of this figure, its mass-production counterpart but one-twentieth, while the 20-knot liner can be built at about 1-180th of the price.

Turning now from the capital cost of an airship considered as a passenger-carrying machine, her operational expenses must be analysed. This is difficult, for there are as yet many unknowns; but, as fuel and hydrogen are used in definite amounts, they can be contrasted with the oil consumption of the 20-knot liner. Assuming the R 100 to fly 3,000 air miles at 70 m.p.h., and to cover 2,000 land miles, the consumption of petrol will be 26 tons, while that of hydrogen will amount to 856,000 cubic feet. The 20-knot liner, in covering the same number of land miles, will burn 594 tons of oil. Taking current prices for the two fuels, and the hydrogen at the price at which it can be manufactured at a mooring mast station, the relative cost per passenger will be:—Liner, 1; airship, 5.

Here, speaking of things as they are, it is but just to point out that, if the airship were so successful as to warrant the

capital expenditure necessary to equip the mooring mast stations with efficient rather than cheap hydrogen plants, so that the gas could be made at about the same price as is possible in England today, the relative figures would be changed to:—Liner, 1; airship, 2.3.

The higher speed of the airship makes a further adjustment permissible. On this hypothetical 2,000-mile journey, while in the liner catering expenses for four days must be considered, in the airship they will be halved; so, if in both cases 30s. a head a day is regarded as the transport companies' costs, the relative figures become:—Liner, 1; airship, 1.2.

Let us now turn to some less satisfactory features. Our designers have gone a long way towards producing an efficient airship structure, but there has not been a corresponding advance in methods of propulsion. R 100 has had to be equipped with petrol-burning aeroplane engines. R 101 has the ideal type of prime mover in the compression ignition engine, but this is at present so heavy as to have seriously penalised the performance of an otherwise efficient vessel. It is due to tardy engine development that one ship has less safety than is desirable (all fires in British airships, with two possible exceptions, have arisen from petrol), and the other less performance than might be expected.

Regrettable, too, is the lack of progress with regard to the material of which gasbags are made. Today, much as was done 15 years ago, goldbeaters' skin is fastened by a flexible adhesive to a good Egyptian cotton cloth. Process methods and the nature of the adhesive have certainly changed, but in the manufacture of the gasbags for the two airships over 2,500,000 skins have had to be handled repeatedly. The outer cover has made perhaps even less advance.

Atmospheric Risks

Navigation and the effect of atmospheric electricity are questions which raise doubts only to be set at rest by experience. Airship navigation, when land, sea, sun, or stars are visible, permits of a precision not greatly inferior to that of ocean-going vessels. Even when visibility is nil, and certainly during daylight hours, directional wireless will often allow of the same exactitude. At least two forms of atmospheric electricity have to be considered—the brush discharge type and lightning. The former, as a result of experience, is held not to be a source of danger; as to the latter, though the same view is taken, confidence is not so great.

Two Zeppelins have been destroyed in thunderstorms, but more airships have been struck by lightning and survived. Dr. Eckener, the most experienced of pilots, has been in airships on many occasions when they were directly struck, yet he suffered no harm. If a ship is discharging gas when the flash occurs, as is known to have been the case in one disaster, the danger is great, for the spark may ignite the hydrogen-air mixture surrounding certain portions of the ship. If no escape of gas is taking place, a condition corresponding with Dr. Eckener's experience, there is nothing combustible external to the ship, and the electrical energy passes through the metal structure of the hull.

In concluding this review of a finely-conceived experiment one would like to congratulate its authors on the measure of success so far attained. Their work has not infrequently been assailed, but it has been described by the author of the James Forrest Lecture before the Institution of Civil Engineers as the outstanding achievement of aeronautical engineering since 1914.

TAXI!

A Few Notes on the N.F.S. Air Taxi Service

AS most of our readers know, National Flying Services, Ltd., have, for some time past, operated an air taxi service, whereby machines may be chartered at a moment's notice for a journey to practically any destination. The following notes regarding the scope of this service may, however, be of interest.

Stations.—N.F.S. air taxis are now stationed at London (Hanworth), Leeds, Hull, Reading, Nottingham, Blackpool, Scarborough, and, temporarily, Swansea.

Aircraft.—The type of aeroplane most used for air taxi work is the Desoutter cabin monoplane, which carries two passengers and is capable of a cruising speed of 95 miles an hour. Eleven of these machines have been taken into service, nine of which are in active operation and two are kept in reserve.

Total Fleet.—The total fleet of aircraft available at the stations of National Flying Services numbers 55 machines, and all these can be called upon for urgent taxi missions. In addition to the two-passenger Desoutters, the fleet includes Moths, Bluebirds and Spartans, which are single-passenger machines of the conventional light aeroplane class.

An eight-passenger machine is available for the transport of large parties, and is at present stationed at Hull. This is a D.H. 61, similar to the aircraft used on the Australian air lines.

Holiday Tours.—In addition to the hire of air taxis for urgent journeys, many people are now chartering machines for holiday flights, especially for trips to Le Touquet, Dinard and Biarritz. Short sight-seeing trips are also proving an attraction. For example, a flight for two people from Hanworth to Windsor Castle and back is obtainable for £1 per head, including transport to and from Trafalgar Square.

Range of Service.—Air taxis can be hired to fly to practically any destination, and have already been chartered for journeys to practically every important centre of England and also to most of the big cities on the Continent. Among the towns visited on these flights are Bath, Bristol, Berlin, Biarritz, Brighton, Cardiff, Camborne (Devon), Canterbury, Cowes, Deauville, Dinard, Edinburgh, Eastbourne, Exeter, Glasgow, Hitchin, Hull, Leeds, Luton, Le Touquet, Liverpool, Manchester, Norwich, Northampton, Oxford, Ostend, Paris, Penzance, Selsea, Southampton, Torquay, Teignmouth, Uttroter, Wolverhampton and Yeovil.

The Latest Example.—An example of the value of an air taxi organisation with branches in all parts of the country is furnished by a booking which was received recently. A Dutch business man arrived at Harwich at 6 a.m. An air taxi met him and flew him to Hull, where he transacted his business, and afterwards flew back to Harwich in time to catch the return boat to Holland that night.

BRITISH AIRCRAFT FOR BELGIUM

THE WESTLAND "WESSEX": A new version of the Westland IV Limousine, a six-seater commercial cabin monoplane fitted with three Armstrong-Siddeley "Genet-Majors." Four of these machines have been ordered by "Sabena," the premier air line operating in Belgium and the Belgian Congo. On July 2, M. Cocquyt, of "Sabena," took delivery of the first machine, and before flying it to Belgium he made a series of test flights, with which he expressed himself extremely satisfied. Incidentally, the marking "P-" is the "trade" number allotted to the Westland Aircraft Works for aircraft which have not yet received their full registration letters.



THE WAPITI AEROPLANE IN IRAQ

Being a lecture before the Westland Aircraft Society at Yeovil, by Squadron-Leader J. J. Breen, R.A.F.

THE lecturer first stated that any expressions of opinion were held by himself, and not necessarily the official views of the Air Ministry.

He then mentioned that he had the honour to command the first squadron to be equipped with the Wapiti aircraft, No. 84 Bomber Squadron, stationed at Shaibah.

Sqdr.-Ldr. Breen pointed out that the Wapiti is now the standard equipment of two regular squadrons in Iraq, and two in India, whilst the Communication Squadron and three Auxiliary Air Force Squadrons at home are partly equipped with this machine. Wapitis are also in use in Australia and South Africa, but the lecturer pointed out that the whole of his experience was based on operations in Iraq, but no doubt the climatic conditions there experienced were not entirely dissimilar from those obtaining on the North-West Frontier of India, and possibly in other parts of the Empire.

He next explained the duties of the Air Force in Iraq, entailing extensive reconnaissance, and occasional active service in suppressing the hostile tribes of raiding natives.

He then proceeded to describe the geographical features of the country flown over, and showed a series of very interesting slides of the various types of country. The absence of vegetation over most of the area was marked, and the general sandy and stony surface showed that the conditions under which the aircraft operated are far more arduous than are the conditions at home.

The possibility of sandstorms developing quickly means that the machines have to be prepared to land immediately such storms are seen approaching, and the machine has to be quickly secured to the ground by the means of screw pickets which are carried, otherwise there is danger of the machine being blown over.

The all-pervading dust and sand naturally results in a good deal of extra care and maintenance of the aircraft, and in spite of all that can be done by washing down, careful greasing, wear and tear of moving parts is abnormal.

In addition to these conditions, the heat under which the aircraft have to operate means that there is a tendency for engines to overheat, the temperature from about May to October is approximately 120° F. in the shade, and 160° F. in the sun. To meet these conditions, aircraft must primarily have a robust structure to withstand hard usage, and parking in the open for long periods in extreme temperatures and boisterous weather conditions.

Secondly, a reliable engine is essential. A forced landing may mean that the machine is stranded for some days, because if dust storms arise, then it is impossible for other machines to fly to the rescue. Moreover, it is extremely difficult to find the machines in such a vast expanse of desert country.

Thirdly, because of the above conditions, special desert equipment has always to be carried, such as rations, drinking water, covers for wheels, cockpit openings, engine and air-screw, screw pickets, spare wheel, blankets and tool kits.

In considering these features, he had nothing but praise for the Wapiti aeroplane.

He mentioned that the general lay-out of the machine from the point of view of the gunner and bomber and desert equipment stowage was really excellent. The undercarriage he termed admirable. He further mentioned that the machine was very comfortable for night flying.

A few difficulties had been experienced as was to be expected with a new machine operating under the arduous conditions outlined above, but the lesson had been learnt from these early troubles, and most of the difficulties had he understood, now been overcome. The difficulty of high oil temperatures still remained with the air-cooled engine with its exhaust ring. In spite of the over-heating, the engines kept on running better than might have been expected.

The need for some form of starting device different to the standard Hucks claw and gas starter was needed, and he was glad to hear that on the Mk. II Wapitis with the Jupiter VIII engine, hand turning gear was provided.

The hard nature of the ground had led to certain tail skid failures, but here again he had seen the modified design which he thought should stand up to the extreme conditions of service in Iraq.

The question of propellers was mentioned, as under the extreme conditions of temperature, certain difficulties had been experienced. Moreover, a propeller which suited a climate in England always tended to over rev. when used in Iraq, because the air was more rarified.

He then quoted a case showing the great convenience of repairs in these parts. In this case a petrol tank had been accidentally punctured by a piece of rod. The machine was able to fly to the depot, have the tank changed in 2½ hours and flew back again the same day, and was carrying on with the next morning's work without delay.

The question of additional comforts, such as pneumatic upholstery for the pilot's seat and also a collapsible ladder to assist the crew in reaching the top cylinders of the engine were desirable improvements.

In conclusion, however, Squadron-Leader Breen said that he had developed a real affection for the Wapiti, and with the latest improvements, he thought that the R.A.F. overseas would be very satisfied with the machine.

Capt. Keep then invited questions from members, and an interesting discussion on several technical points arising out of the lecture followed.

Capt. Keep then called upon Mr. Graham, the resident Air Ministry Technical Officer at the Works, to propose a vote of thanks, which was passed with acclamation.



Prince of Wales arriving at Ipswich in the Wapiti which was built for his personal use.

(Flight Photo.)

AIR MINISTRY NOTICES

AIR MINISTRY NOTICE TO AIRMEN

Flights Across the Strait of Dover: Arrangements for Reporting and Search

1. Reporting of Aircraft on Flights Across the Strait of Dover

(a) Aircraft equipped with radio—

The pilot of an aircraft equipped with radio will report his position by radio on crossing the coast on both sides of the Strait, and, in emergency, will give the appropriate distress calls.

(b) Aircraft not equipped with radio—

The pilot of an aircraft not equipped with radio, or the radio of which is out of order, is advised to make use of the following system for signalling his passage across the Strait:—

(i) An aircraft leaving England for the Continent should circle at an altitude not exceeding 1,000 ft. (305 m.) at Lympne aerodrome, and, again, after crossing the Strait, circle in a similar manner at one of the following Continental reporting points:—

Ostend (Steene) aerodrome, S. Inglevert aerodrome, Calais semaphore station, Alprech semaphore station.

(Note.—Maps showing the positions of Calais and Alprech semaphore stations are published herewith.)

Similarly an aircraft leaving the Continent for England should circle at one of the Continental reporting points and again, after crossing the Strait, at Lympne aerodrome.

(ii) The aircraft must continue to circle at a reporting point (except, at

Motor-lifeboats from Boulogne, Calais and Dunkirk, available during the times when the French Air Union is operating.

Aircraft patrols by the French Air Union, as far as possible, during normal working hours.

Flying-boat owned by Compagnie Aérienne Française from Calais.

The warning by radio of all shipping in the vicinity to keep a look-out, such shipping being informed, if possible, of the position of the aircraft.

(c) The pilot of an aircraft which is forced to descend on the sea is advised, circumstances permitting, to endeavour to alight as near as possible to one of the ports mentioned in para. 2 (6). In making his decision he will take into account the direction of the wind, the height from which the descent has to be made, and his distance from the coast.

(d) Owners of aircraft may be liable for the cost of search operations.

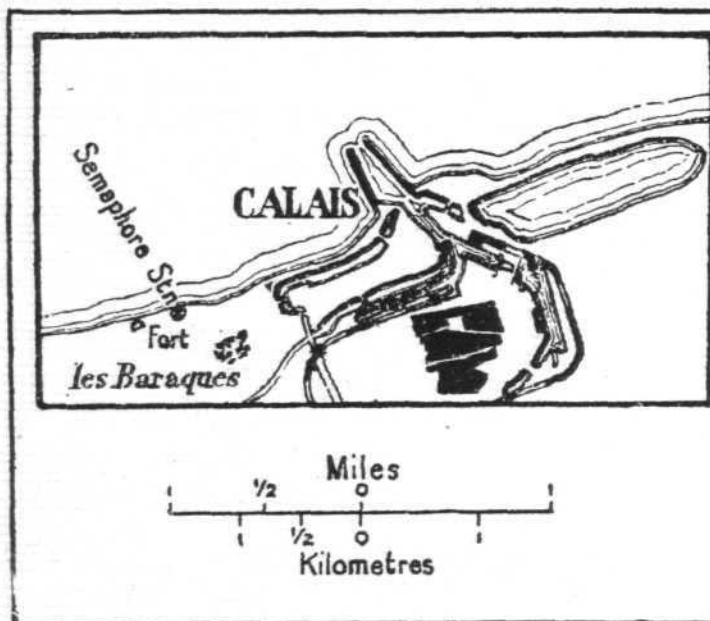
(General Notice No. 16 of 1930.)

AIR MINISTRY NOTICE TO AIRCRAFT OWNERS AND GROUND ENGINEERS

Avro 504 K. Aircraft—Provision of Fireproof Bulkheads

1. The attention of Aircraft Owners and Ground Engineers and all concerned is drawn to the desirability for the immediate incorporation of a fireproof bulkhead in all Avro 504 K. aircraft, particularly in view of the fact that such bulkheads will in the future become compulsory under the provisions of Notice to Aircraft Owners and Ground Engineers No. 26 of 1929.

2. Several aircraft of this type have already been fitted with fireproof bulk-



present, at Calais and Alprech), until a signal of acknowledgment is made from the ground to signify that the circuit has been observed by the ground personnel.

The signals of acknowledgment employed at the various reporting points are as follow:—

Lympne Aerodrome.—The flashing of a white light.

Ostend (Steene) Aerodrome.—The display of a black-and-white chequered panel, 4 by 4 metres in size, in a position 20 metres from the aerodrome buildings.

S. Inglevert Aerodrome, Calais Semaphore Station and Alprech Semaphore Station.—The display of a white panel on a black background.

N.B.—The panels at Calais and Alprech are at present in course of installation. Pending completion, therefore, no signal of acknowledgment will be given at these two points.

(iii) An aircraft which has effected a circuit at Lympne aerodrome or at Ostend (Steene) aerodrome indicating departure for the Continent or for England, but which is obliged, owing to weather or other cause, to abandon the attempt to cross the Strait, must return to Lympne or to Ostend (Steene) and circuit the aerodrome a second time, such circuit being continued until the signal of acknowledgment, defined in (ii) above, is given. This second circuit will have the effect of cancelling the first circuit.

At present this "cancellation" procedure is only to be employed at Lympne and Ostend (Steene) aerodromes. Arrangements will be made later for its adoption at the French reporting points.

(iv) In the event of an emergency landing being effected on either side of the Strait, the pilot must report the fact to the nearest aerodrome.

(v) It is of the utmost importance that pilots taking advantage of this system shall adhere consistently to the rules defined above.

For example, a pilot who signals his departure on one side of the Strait must not fail to report further in one of the following ways:—

By signalling his arrival when he reaches the other side of the Strait, or
By effecting a "cancellation" circuit when the sea-crossing has been abandoned, or

By reporting to the nearest aerodrome when an emergency landing has been effected.

If this is not done, the aircraft may subsequently be reported missing, and unnecessary search operations (see 2 below) instituted.

Similarly circuits must always be continued until the signal of acknowledgment has been received, with regard to Calais and Alprech, see para. 1 (6) (ii) above. Otherwise, in the case of incoming traffic, the aircraft may subsequently be reported missing, and, in the case of outgoing traffic, no notification of the intended sea-crossing will be made to the reporting points on the other side of the Strait, the aircraft, therefore, proceeding without the protective arrangements having been instituted.

2. Assistance to Aircraft in Distress in the Strait of Dover.

(a) The circumstances in which search and rescue operations will be commenced are as follow:—

(i) On receipt of a distress call from an aircraft equipped with radio, or

(ii) On receipt of reliable information that an aircraft in distress has been sighted, or

(iii) If an aircraft bound for England is more than 1 hour overdue, or the report of an aircraft bound for the Continent more than 1½ hours overdue.

(b) The search and rescue service comprises:—

Motor-lifeboat from Dover and tugs from Dover, Boulogne, Calais and Dunkirk, available at all times.

heads, and suggestions for alternative forms of bulkheads which will comply with the requirements are given below.

Avro 504 K. with Mono-Gnome Engine

No carburettor is fitted to this engine, and a bulkhead of 20 S.W.G. steel or a sandwich of two 24 S.W.G. aluminium plates interlined with asbestos at least 3/32 in. thick on the engine side of the main engine plate, together with a fireproof cover totally enclosing the magneto and leads and bolted to the engine plate, will be considered satisfactory. Suitable doors or removable parts of the cover, should be fitted to give access to the magneto.

The rubber joints on the petrol pipes at the needle valve and at the engine should be replaced by joints of a fireproof pattern. Petroflex joints, or rubber covered with brass or copper foil, would be accepted.

The aluminium undershield to the fuselage must be retained and must be a close fit round the air inlet pipe.

Avro 504 K. with 130 H.P. Clerget or 110 H.P. le Rhone Engine

Two different types of fireproof bulkhead for the above aircraft are indicated, (1) for use when the present oil and fuel tanks are retained, and (2) for use when wing fuel tanks are fitted.

(1) This consists essentially of a fireproof box, of either 20 S.W.G. steel plate or a sandwich of two 24 S.W.G. aluminium plates with an interlining of asbestos at least 3/32 in. thick, inside the aircraft framing. The front engine plate and oil baffle plate forms the front side of this box and the top is shaped to fit beneath the oil and fuel tanks, thus leaving these tanks on the aircraft side of the bulkhead.

The rear side of the bulkhead is led down between the two main diagonal side members, sufficient clearance being left at the bottom to enable the rudder bar to be operated.

A pocket covering the rear engine plate and air intake pipe is formed at the top, the air intake being bushed where it passes through the bulkhead.

Sliding doors are fitted on the sides of the fireproof box to give access to the magneto, carburettor and needle valve.

Owing to the rather complicated shape of this fireproof box it may be preferred to make it of 20 S.W.G. steel with riveted corners.

(2) In this case a fireproof bulkhead of 24 S.W.G. aluminium sheets interlined with asbestos at least 3/32 in. thick is fitted across the rear side of the main diagonal side members, a pocket being formed to accommodate the rear engine plate and air intake, the latter being bushed where it passes through the bulkhead.

The fitting of this bulkhead necessitates the dropping of the front rudder bar and foot boards approximately 4 in. in order to obtain sufficient room to operate the rudder, or, alternatively, the bottom of the bulkhead could be shaped to allow sufficient space for the rudder bar in the normal position.

With this bulkhead, complete and easy access to the engine, magneto and carburettor can be obtained.

In both schemes (1) and (2) the petrol pipe joints on the engine side of the bulkhead must be of fireproof pattern.

Although these latter two schemes are principally suggested for Clerget and le Rhone engine aircraft they can be adapted to the Mono-Gnome engine aircraft if desired, a different type of rear engine plate pocket to allow for the vertical air intake being the chief difference necessary.

3. Any further information in connection with the above can be obtained on application to the Airworthiness Department, Royal Aircraft Establishment, South Farnborough, Hants.

(No. 19 of 1930.)

THE ROYAL AIR FORCE

London Gazette, July 1, 1930.

General Duties Branch

Capt. A. D. MacDonald, M.C. (R.A.R.O.) is granted a short-service commn. as Flt.-Lieut. on Supplementary List, with effect from June 16, and with seniority of Feb. 3, 1924. Flying Officer J. B. Mackenzie takes rank and precedence as if his appointment as Flying Officer bore date April 1. Reduction takes effect from May 16. Group Captain A. Fletcher, C.M.G., C.B.E., M.C., is placed on retired list at his own request, and is granted permission to retain honorary rank of Air Commodore; July 1. Flying Officer E. W. T. Crouch is placed on retired list at his own request; July 1. Flt.-Lieut. (Hon. Squadron Leader) V. M. Kenny-Leveck, M.B.E. (Major, General List, R.A.R.O.) relinquishes his short-service commn. on Supplementary List on account of ill-health; June 28. Lt. G. F. Renwick, R.N., Flying Officer, R.A.F., ceases to be attached to R.A.F. on return to Naval duty; June 20.

Medical Branch

The following Flying Officers are promoted to rank of Flt.-Lieut.:—G. W. Paton, M.B., Ch.B.; June 1. H. C. S. Pimblett, M.B., B.S.; July 2. C. Crowley, M.B., B.Ch.; July 2.

Chaplains Branch

The Rev. G. A. Davies, B.A., is promoted to relative rank of Wing Commander; June 28.

Memoranda

The permission granted to W. Spink to retain rank of Lieut., which was withdrawn on his enlistment in the Territorial Army, is restored on his discharge; June 4. The permission granted to R. B. Herring to retain rank of Lieut., which was withdrawn on enlistment in R.A.F., is restored on his discharge; June 4.

RESERVE OF AIR FORCE OFFICERS

General Duties Branch

The following are granted commns. in Class AA ii as Pilot Officers on probation:—C. D. Pitman; June 16. J. H. C. Beard; June 17. J. A. Champness; June 19. C. C. Ellis is granted a commn. in Special Reserve

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the Royal Air Force, are notified:—

General Duties Branch

Squadron Leaders: J. C. Slessor, M.C., to R.A.F. Depot, Uxbridge, 20.5.30. G. E. Gibbs, M.C., to Air Ministry (D.O.I.), 23.6.30.

Squadron Leaders: L. M. Bailey, A.F.C., to H.Q., Coastal Area; 1.7.30. A. Durston, A.F.C., to H.M.S. *Courageous*; 1.7.30. A. G. Bishop, O.B.E., A.F.C., to R.A.F. College, Cranwell; 30.6.30.

Flight Lieutenants: N. H. D'Aeth, to Special Duty List, 27.6.30. S. G. Connolly, to No. 5 Flying Training School, Sealand, 16.6.30. C. C. Edwards to Station H.Q., Horncchurch, 25.6.30.

Flight Lieutenants: D. F. Anderson, D.F.C., A.F.C., to Aircraft Depot, India; 9.6.30. A. C. Evans-Evans, to Station H.Q., Hawkinge; 25.6.30. L. Darvall, M.C., to No. 503 Sqdn., Lincoln; 30.6.30. L. Eardley-Wilmot, to R.A.F. Depot, Uxbridge; 26.5.30.

Flying Officers: J. S. Wilkins, to R.A.F. Depot, Uxbridge, 13.6.30. C. G. Davies, to No. 441 (Fleet Spotter Reconnaissance) Flight, 19.6.30.

Flying Officers: F. Gower-Jones, to R.A.F. Depot, Uxbridge; 28.5.30. N. F. V. Henkel, to R.A.F. Depot, Uxbridge; 13.6.30.

Pilot Officers: D. H. A. Golege-Steel and N. Stratton, to No. 2 Sqdn. Manston, 17.6.30. G. E. Agard-Butler, C. H. Glover, B. Paddon, H. G. J. Purcell and S. H. Wiltshire, to No. 4 Squadron, S. Farnborough, 17.6.30; D. W. Lydell and J. M. Waddell, to No. 13 Sqdn., Netheravon, 17.6.30; A. H. Houghton and F. J. B. Keast, to No. 16 Sqdn., Old Sarum, 17.6.30; D. C. Harrison, to No. 26 Sqdn., Catterick, 17.6.30; G. Calvert and J. T. Myers, to No. 12 Sqdn., Andover, 17.6.30; I. L. S. McNicol and G. E. S.

as a Pilot Officer on probation; June 9. The following Flight Lieuts. are promoted to rank of Sqdn.-Ldr., July 1:—H. L. Nunn, D.S.C., D.F.C., J. L. N. Bennett-Baggs.

The following Flying Officers are promoted to rank of Flt.-Lieut., July 1:—H. G. W. Debenham, C. B. Wilson, G. Rose, T. E. W. Browne, H. N. Davies, F. T. Stacey, C. Clarkson, L. A. Egglefield, E. C. G. Badcock, W. F. Rimmer, E. L. Drew, F. H. Dight. The following Pilot Officer on probation is confirmed in rank:—H. Clive-Smith; May 29.

Flying Officer E. G. D. Stewart, M.C., is transferred from Class C to Class A; May 8. Flying Officer W. F. Bryanton is transferred from Class A to Class C; April 11. Flying Officer A. W. Wood relinquishes his commn. on completion of service; May 27.

Stores Branch

The following Flt.-Lieuts. are promoted to rank of Sqdn.-Ldr., July 1:—A. J. Roberts, H. P. Bridges. Flt.-Lieut. C. Harvey relinquishes his commn. on completion of service, and is granted permission to retain rank of Squadron Leader; June 17.

Medical Branch

Flt.-Lieut. T. L. P. Harries, M.B., relinquishes his commn. on completion of service; Jan. 30.

AUXILIARY AIR FORCE

General Duties Branch

No. 601 (COUNTY OF LONDON) (BOMBER) SQUADRON.—The following to be Pilot Officer:—A. C. M. Jackaman; May 3. Pilot Officer E. A. Huntington-Whiteley resigns his commission; June 17. No. 604 (COUNTY OF MIDDLESEX) (BOMBER) SQUADRON.—The following to be Pilot Officer:—L. E. A. Healy; June 6. No. 605 (COUNTY OF WARWICK) (BOMBER) SQUADRON.—The following to be Pilot Officer:—G. J. Paddock; June 12.

No. 603 (CITY OF EDINBURGH) (BOMBER) SQUADRON.—Pilot Officer S. M. Musgrave relinquishes his commn. on account of ill-health, and is permitted to retain his rank (June 25).

No. 604 (COUNTY OF MIDDLESEX) (BOMBER) SQUADRON.—The follg. to be Pilot Officer:—C. P. Gabriel (June 2).

Williams, to No. 58 Sqdn., Worthy Down, 17.6.30. C. E. Morse, to No. 100 Sqdn., Bicester, 17.6.30; N. Alexander, G. Bearne and G. N. Warrington, to No. 501 Sqdn., Bristol, 17.6.30; F. C. Allen and W. E. Grant, to No. 502 Sqdn., Aldergrove, 17.6.30; G. M. Ievers and I. A. Critchley, to No. 503 Sqdn., Lincoln, 17.6.30; C. A. Ball and N. J. Capper, to No. 504 Sqdn., Nottingham, 17.6.30.

Stores Branch

Flight-Lieutenant A. J. Cox, M.B.E., to R.A.F. Base, Calshot, 12.6.30. **Flight Lieutenant** R. H. Latham, to Station H.Q., Manston, 17.6.30. **Flying Officers** H. A. Wrigley, to Sch. of Balloon Training, Rolleston Camp, 23.6.30. J. S. French, to No. 1 Flying Training Sch., Netheravon, 23.6.30.

Accountant Branch

Squadron Leader E. N. E. Waldron, to R.A.F. Base, Gosport, 30.6.30.

NAVAL APPOINTMENTS

The following appointment was made by the Admiralty on June 25:—**Lieut. (F.O., R.A.F.)**—H. L. Hayes, to *Glorious* (June 24). The following appointments were made by the Admiralty on July 1:—**Lieut.-Commr.**—H. L. St. J. Fancourt (Flt.-Lieut., R.A.F.) to *Courageous*; July 1.

Lieuts. (F.O., R.A.F.)—G. R. M. Robertson, J. E. Fenton, and J. W. M. Healing, to *Victory*; and G. Willoughby, J. I. Robertson, D. M. L. Neame, J. W. Hale, H. C. Ranald, C. John, S. T. Morgan, S. W. D. Colls, A. P. Colthurst, J. Brett, D. J. Margetts, J. B. Buckley, C. W. Phillips, H. N. M. Nangle, and L. C. Rowe to *Courageous*; July 1.

IN PARLIAMENT

Hendon Aerodrome and Low Flying

Mr. MONTAGUE, on July 2, in reply to Sir Philip Cunliffe-Lister, said complaints have been received from time to time from residents adjacent to the Hendon aerodrome of nuisance caused by low flying, particularly during the week-ends, and all concerned at the Air Ministry are fully alive to the desirability of lessening any inconvenience caused to residents. It is impossible, however, wholly to remove it, since Hendon aerodrome is an auxiliary Air Force station at which flying is necessarily done to a large extent during week-ends, when alone many of the pilots concerned have time to attend. Orders have been issued prohibiting flying during the hours of Church services on Sunday morning and restricting it as far as possible during those of evening service. Anything in the nature of unnecessary low flying is prohibited, and in suitable cases disciplinary action would be taken against offenders. Everything that is possible will be done to reduce the inconvenience to residents to a minimum, but I am afraid that noise in the vicinity of an aerodrome is at present inevitable. The Secretary of State would be willing to discuss the difficulties with representative residents from the neighbourhood, but I would point out that we have had a discussion on this problem, which is one that affects London all the way round, as well as Hendon.

Mr. Maclean: Is it not the case that those living in the vicinity of shunting yards suffer a great deal more nuisance than those living in the vicinity of Hendon aerodrome?

Mr. Montague, in reply, to Mr. Day, said that low flying was a question entirely in the hands of the police.

Aviation and Continental Service

Mr. MONTAGUE, on July 1, in reply to Lieut.-Com. Kenworthy, said the position of the proposed civil air service between the North-East Coast of England and the Continent had not altered. A subsidy would be required and that by agreement we could pay a subsidy up to 1939 only to Imperial Airways, Limited, who do not consider a service upon the suggested route commercially practicable.

PERSONALS

Married

On June 28, at Fulham, ARNOLD BEYNON, R.A.F., eldest son of Mr. and Mrs. Richard Bynnon, of Leigh-on-Sea, was married to HELEN MARY, elder daughter of the late WILLIAM SMITH and of Mrs. PEARCE-SMITH, Kensington.

Pilot Officer ARTHUR THOMAS ORCHARD, son of Mr. and Mrs. Orchard, of Seddon, Marlborough, New Zealand, was married on Sunday, June 29, at St. Mary's, Barnes, to GLADYS MARY FEARON, third daughter of the late Mr. and Mrs. Frank B. Fearon, of Panama, Central America.

To be Married

The engagement is announced between Flight-Lieutenant FRANK BOSTON, R.A.F., eldest son of Mr. and Mrs. H. Boston, of Stanley House, Meole Brace, Shrewsbury, and ELIZABETH MARY BARBER LINDSELL, eldest daughter of Mr. and Mrs. A. J. G. Lindsell, of Millfield, Hitchin.

The engagement is announced between Sqdn.-Ldr. RICHARD GREGORY GARDNER, R.A.F., youngest son of Mr. and Mrs. George H. Gardner, of St. Ronan's Road, Southsea, and JESSIE GRACE, eldest daughter of Mr. and Mrs. GEORGE J. BALCHIN, of Regent's Park Road, N.W.

The engagement is announced between NORMAN, only son of the late RONALD MILLWOOD TATE and of Mrs. TATE, of the Willows, Saxlingham, Norfolk, and VALERIE, younger daughter of Captain and Mrs. G. H. TAYLOR, Andover.

Item

The will of the late Mr. ALFRED ERNEST OWEN, of New Hall, Sutton Coldfield, Warwickshire, engineer, of Messrs. Rubery, Owen and Co., Ltd., who died on December 30, aged 62, has been proved at £902,171.

MODELS

THE MODEL AIRCRAFT CLUB. (T.M.A.C.)

Wimbledon Section versus Parliament Hill Section at Wimbledon

EXCELLENT flying weather favoured the meeting of these two Sections, in an inter-team competition, on Wimbledon Common on July 5, in which both Sections were well represented.

Twelve members from each Section were engaged in a keen struggle to obtain the best durations. All types of models were seen in the air, from the early-type single-screw pusher, to the latest triple-gear high-performance fuselage models.

In this contest the ladies were again well to the fore. The wonderful flights of Mrs. Willis and Mrs. White (Wimbledon Section) and Mrs. Burchell and Miss Briggs (Parliament Hill Section) aroused a great deal of enthusiasm among the spectators.

The highest duration recorded was a flight of 87 seconds by Davis, who flew a red fuselage monoplane. This model climbed in small circles to a great height, and came back to earth in a perfect glide.

After a brief interval for tea, Mr. Burchell made an attempt on the duration record for single-screw spar models, his model remained aloft for 93 seconds.

The Wimbledon Section succeeded in winning the team competition, but this has not damped the enthusiasm of the Parliament Hill Section, who hope to be successful at the next meeting.

Results

Wimbledon Section.			Parliament Hill Section.		
Name.	Type.	Highest Duration.	Name.	Type.	Highest Duration.
		secs.			secs.
1. Davis.	Fuse-lage	87	1. Mrs. Burchell	Spar-pusher	61
2. Mrs. Willis.	"	72	2. Miss Briggs.	Fuse-lage	59
3. Haines.	"	63	3. A. E. Jones.	"	51

Visit to Halton

Mr. Newell will captain the T.M.A.C. members who enter for the Farrow Shield, assisted by Mr. Willis (Wimbledon Section), and Mr. Knight (Hampstead Section). Special trains leave Baker Street for Wendover. Mr. Burchell will be looking after the Hampstead Section. Those who are desirous of going by motor coach with Mr. Willis and party should notify him at once, at 96, Fernside Road, Balham, S.W.12.

Twenty-four new members have joined the club during the last week, a new supply of badges have been ordered. These we hope to send with cards at the beginning of next week. Hon. Secretary, A. E. Jones, 48, Narcissus Road, Hampstead, N.W. 6. Phone: Hampstead 8363.

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New Air Service

A NEW passenger and mail air service was inaugurated on July 5 between Paris and Madrid, thus providing a through air service from London to Madrid in one day. Another air mail service, between Basle and Cherbourg, in conjunction with the arrival and departure of transatlantic liners, was opened on the same day.

The Guild of Air Pilots and Navigators of the British Empire

It is understood that the Guild are making representations in the correct quarter that Wing-Commander Kingsford-Smith should be suitably rewarded in recognition of his great Atlantic flight. The employment bureau which the Guild has started is also now working, and forms for registration can be obtained by pilots who desire work on application to the Clerk of the Guild.

Mr. Woods Humphrey's New Post

MR. G. E. WOODS HUMPHREY, general manager of Imperial Airways, has been appointed managing director of the company.

Memorial to Princess Löwenstein

A MEMORIAL to Princess Anne of Löwenstein-Wertheim, second daughter of the fourth Earl of Mexborough, was unveiled in St. Raphael's Roman Catholic Church, Kingston-on-Thames, on July 8. The Princess, with her pilots, Colonel Minchin and Captain Leslie Hamilton, perished in September, 1927, in the attempt made to fly from England to America. The memorial has been erected by the Earl of Mexborough, Captain the Hon. George Savile, and Lady Mary Savile.

PUBLICATIONS RECEIVED

Aeronautical Research Committee Reports and Memoranda:
No. 1289. (Ae. 438).—The determination of the Water Resistance of Seaplanes. By H. M. Garner, M.A., and L. P. Coombes, B.Sc. Oct., 1929. Price 9d. net. No. 1293 (Ae. 442).—Exploration of the Flow near the Screw Proposed for the N.P.L. Compressed Air Tunnel. By C. N. H. Lock, M.A., and A. R. Collar; B.A., B.Sc., Jan., 1930. Price 9d. net. H.M. Stationery Office, London, W.C.2.

Aeronautical Research Committee Reports and Memoranda:
No. 1203 (Ae. 364).—Pressure Distribution over a Yawed Aerofoil. By D. H. Williams, B.Sc. October, 1928. Price 2s. 6d. net. No. 1248 (E. 32).—Torsional Vibration of Crankshafts. A Description of the R.A.E. Mk. III Torsiograph. November, 1928. Price 1s. net. No. 1252 (Ae. 402).—Flow Through Pipe Orifices at Low Reynolds Numbers. By F. C. Johansen. June, 1929. Price 1s. 3d. net. No. 1274 (Ae. 420).—Stresses and Strains in Airscrews with Particular Reference to Twist. By R. McKinnon Wood, O.B.E., M.A. and W. G. A. Perring, R.N.C. April, 1929. Price 9d. net. No. 1286 (Ae. 436).—Records of the Lateral Motion of a Stalled Bristol Fighter Aeroplane with Slots upon the Upper Wing Tips. By Prof. B. Melville Jones, M.A., A.F.C., Fl.-Lt. C. E. Maitland, D.F.C., R.A.F., and R. P. Alston, B.A., July, 1929. 9d. net. H.M. Stationery Office, London, W.C.2.

Technical Notes of the U.S. National Advisory Committee for Aeronautics: No. 333.—Test of an Adjustable Pitch Model Propeller at Four Blade Settings. By E. P. Lesley. Feb., 1930. No. 334.—Comparative Performance Obtained with XF7C-1 Airplane Using Several Different Engine Cowlings. By O. W. Schey, E. Johnson and M. N. Gough. Feb., 1930. No. 335.—The Structure and Properties of Parachute Cloths. By H. J. McNicholas and A. F. Hedrick. March, 1930. National Advisory Committee for Aeronautics, Washington, D.C., U.S.A.

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NEW COMPANY REGISTERED

CIVILIAN AIRCRAFT CO., LTD.—Capital £25,000, in £1 shares. Aircraft proprietors, manufacturers and carriers, aeronautical experts, consultants and engineers, etc. Directors: Sir Benjamin Dawson, Bt., Nun-Appleton Hall, York, textile manufacturer; L. S. Dawson, Nun-Appleton Hall, York, aircraft manufacturer; H. D. Boulton, B.A., Little Croft, Woodhouses, Voxall, Staffs, aircraft manufacturer. Secretary: A. E. Stringer.

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AERONAUTICAL PATENT SPECIFICATIONS

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